FIRE ENGINEERING

OHIO STATE UNIVERSITY
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The Journal of the Fire Protection Profession Since 1877

JUNE, 1951

Four Firemen Lose Lives When Floor Drops During Fire at Peterboro, Ontario (Article in This Issue)

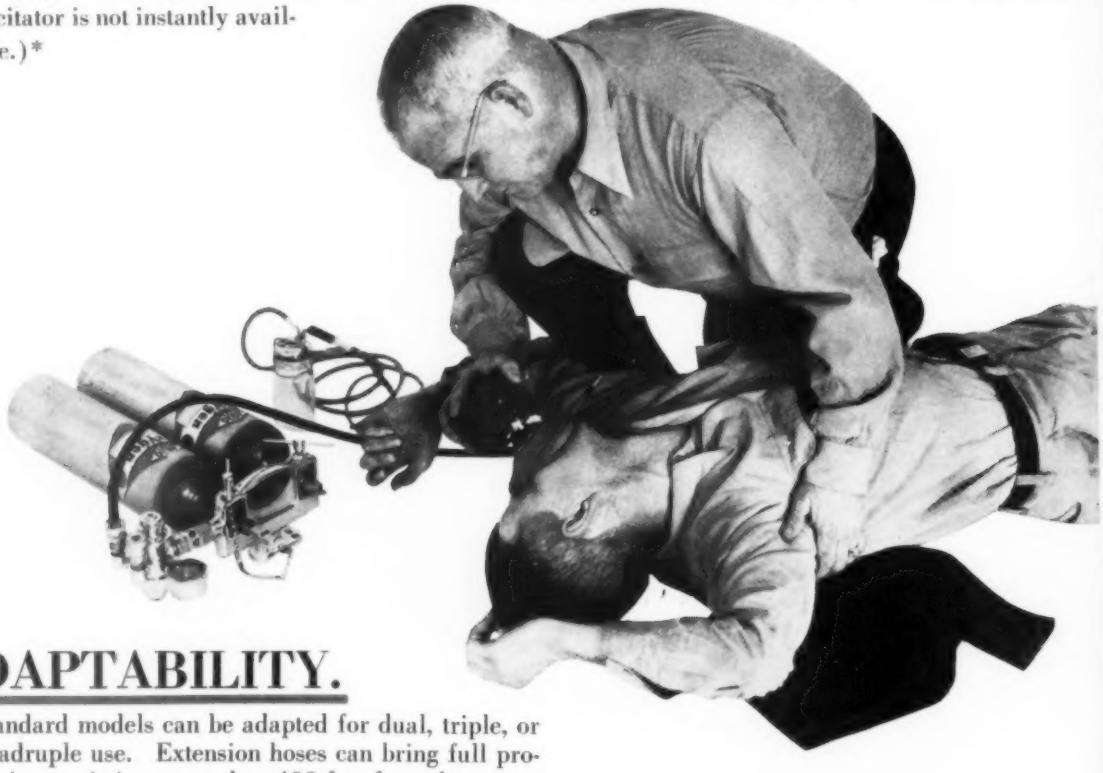
A CASE - SHEPPERD - MANN PUBLICATION

These Advantages Add Up!

SIMPLICITY. In breathing emergencies speed saves lives, and simplicity means speed. Emersons have it.

SAFETY. No instance has ever been recorded of injury from the gentle pressures used. Since approval by the American Medical Association in 1942 thousands of cases have been treated, all safely, including adults, children, and even newborn babies. An important safety factor is the suction phase, which gives vital aid to the circulation by helping the heart to fill normally.*

EFFECTIVENESS. Extensive medical research has found immediate positive-and-negative resuscitation to be the most effective life-saving measure in asphyxial emergencies. (Manual artificial respiration, however, should be used as first aid, if a resuscitator is not instantly available.)*



ADAPTABILITY.

Standard models can be adapted for dual, triple, or quadruple use. Extension hoses can bring full protection to victims more than 400 feet from the parent machine. Manifolds are available for Civil Defense protection.

Write for circular on the newest models.
**Write for free bulletins "Medical Reference on Resuscitation" and "A New Manual Method of Artificial Respiration."*

EMERSON RESUSCITATORS

Can Help You Save Lives

J. H. EMERSON CO.

39 COTTAGE PARK AVENUE CAMBRIDGE 40, MASSACHUSETTS

WARNING!

for AIR RAID, FIRE, SABOTAGE, DISASTER!

Federal sirens have been, and are now, the majority choice for air raid, fire and other warning purposes. During World War II, international committees visited American cities to study their air raid warning systems. It was not coincidence that those cities well equipped with Federal sirens were cited by these unbiased committees as having the finest and most comprehensive systems.

Experienced signal engineers know that the loudest signal is not the best signal for air raid warning. Volume is of little value without distribution. The more built up, the more congested an area, the less distribution of sound from any one unit regardless of its output. Every building, every tree, or every variation of topography, reflects, absorbs, or deflects sound. To offset these factors, as well as humidity, wind direction, local noise levels, etc., the sources of sound must be multiplied in number rather than increased in intensity.

Do not be misled. There are no "miracles"; no "wonder signals" to produce prodigious range at low cost. The laws of physics do not change. Despite claims that may be made to the contrary, no one inspired by World War III fears, has been able to completely outclass what Federal's years of engineering in audible signals is now offering.

Dollar for dollar, *smaller* signals will do a better, more uniform, more comprehensive and more dependable job than fewer large signals. In highly congested business districts, we recommend type D or type L sirens at street intersections. Less congested municipal areas can be covered well by 2 horse-power sirens located ½ to 1 mile apart. Suburban residental or semi-rural areas usually can be covered by larger sirens at greater intervals.

Federal General Alarm Sirens are the product of years of experiment and experience. The vertical design was selected because of its numerous and obvious advantages.

Vertical rotating parts, like a spinning top, provide natural balance with minimum friction and bearing wear. The motor, rotating but one properly designed rotor, can convert a greater portion of its energy into producing sound.

Since sound is produced at the ports of the rotor and stator, a vertical siren radiates its voice horizontally over 360° where it is most effective.

Federal Vertical Sirens are available in a variety of capacities from 2 to 7½ horsepower. Electrical services available vary widely, but sirens for generally available power supplies are carried in stock for prompt shipment.

Write today for Bulletin 95

FEDERAL ENTERPRISES, INC.

FORMERLY: FEDERAL ELECTRIC COMPANY, INC.

8702 SO. STATE STREET • CHICAGO 19, ILLINOIS

FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

All in Favor—

THE Birmingham, Ala. Fire Department has been making quite a name for itself—and incidentally for FIRE ENGINEERING.

- Birmingham is one of the many large cities that boasts a copy of FIRE ENGINEERING in every fire house.
- Unlike most other such cities, the department doesn't enter a bulk subscription for this journal. Instead, it's pretty much up to the men in the individual fire stations to decide whether or not they want FIRE ENGINEERING — and whether or not each year's subscription shall be renewed.
- In order to be brutally fair about this, at least one company—the Central Park Fire Station, on Ave. Q. come renewal time, takes a poll of all the Brothers. Each states whether he's for or against renewal.
- How do we know this? Well, for one reason, on the back of the current 2-year renewal subscription invoice is this message: *"All in favor of reordering* FIRE ENGINEERING vote yes." Then there's a column under the heading "YES" and one under the heading "NO."
- Nine names are listed under the "YES" sign. Not a name under the "NO"!
- And so we vote our thanks to Messrs: Pridmore, Griffin, Langley, Stewart, Smith, Rawlings, Perry, Rogers and Walker of the "Ave. Q" station, Birmingham Fire Department, for *their* vote of confidence in FIRE ENGINEERING.
- This is the sort of reader acceptance that has spurred on this Journal's editors and advertisers for going on three-quarters of a century!

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Wastes Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879. ¶Contents of this issue copyrighted, 1951, by Case-Shepperd-Mann Publishing Corp. President and Advertising Director, KARL M. MANN; Vice-President and General Manager, I. HERBERT CASE; Secretary and Editorial Director, FRED SHEPPERD; Assistant Advertising Director, WALTER H. FREDRICKS; Eastern Representatives, WILLIAM J. GIBSON, ALFRED J. HOUGHTON; Circulation Manager, W. H. TOPHAM. CHICAGO OFFICE: W. S. CLEVENGER and L. M. ROCHE, 8 So. Dearborn St., Chicago 3, Ill.; SAN FRANCISCO: CHARLES H. WOOLLEY, 605 Market Street, San Francisco 5, Calif.; LOS ANGELES: AUGUST HAURIN, 6000 Miramonte Blvd., Los Angeles 1, Calif. ¶Printed in U.S.A.

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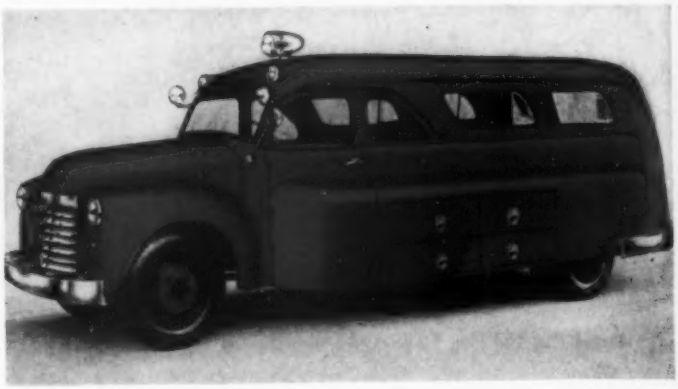
FABRIC FIRE HOSE CO.

1869 SANDY HOOK, CONN. 1951

DISASTER CARS

Built to your individual specifications

The responsibilities placed upon Public Safety Departments today emphasize the importance not only of the well-equipped Disaster Car — but also of equipment specially planned and constructed to meet the needs of the individual community as recognized by its qualified public safety officials.



Our personnel, plant, and production facilities are specially equipped to meet your requirements.

Our entire organization is devoted to the development of equipment with construction details individualized to meet specific situations.

Our nation-wide staff of sales engineers gives you direct personal attention.

One of our experienced sales engineers will consult with you and make sure that your needs are fully understood by our engineering and production departments. Write, wire, or phone for consultation with one of our representatives.

COAST TO COAST

The GERSTENSLAGER Co.

WOOSTER, OHIO ESTABLISHED 1860

New B.F.Goodrich Fire King fire hose 50% stronger, 12% lighter

Stands higher pressures—tested to 600 pounds

FOR years engineers have been searching for a stronger, lighter fire hose cord. A new chemically-produced fiber has now been designed—especially for fire hose. Not affected in any way by moisture, mildew, mild acids or alkalies. Used in new Fire King hose as the cords that go *around* the hose and carry the load under pressure.

Stands higher pressures—In actual laboratory tests, Fire King hose—with the new cord—was found to be 50% stronger than standard hose. Every length of Fire King fire hose is tested to 600 pounds pressure.

Lighter, more flexible—Fire King cord is lighter, more flexible than ordinary fire hose cord, making hose easier to handle and coil in a small diameter. New Fire King hose is 12 to 15% lighter than standard B. F. Goodrich fire hose tested to *400 pounds pressure.*

End protection—Fire King (2½" size only) has the exclusive patented B. F. Goodrich end protection—an extra ply of hard woven cords extending 12" from the coupling. Adds 100% more strength to coupling area. Not one single length of B. F. Goodrich fire hose with end protection has ever failed in the coupling area.

Fire King is available with or without Hydroseal treatment. It's a double jacket hose, available in 1½" and 2½" sizes.

Fire King combines all the features of the highest grade B. F. Goodrich fire hose with a brand new feature—Fire King reinforcing cord. The result is a premium fire hose 50% stronger, 12 to 15% lighter, yet only slightly higher in cost.

Departments looking for ways to lower hose costs by getting hose that lasts longer should write for the name of nearest BFG Fire Hose Distributor. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

Fire Hose
BY
B.F.Goodrich

DUO-SAFETY Safety

Your Choice of 3!

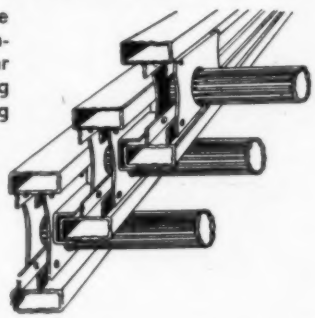
in the DUO-SAFETY LADDER LINE

3 TYPES—3 PRICES—3 PERFORMANCE STANDARDS

Yes, you have your choice to meet your requirements in Duo-Safety's famous line of all-aluminum fire ladders. For pumper use or fire trucks . . . for extra-heavy duty or lighter service . . . and at a price range to fit your budget. Choose the line that gives you the best . . . and that's best for you . . . Duo-Safety. Write for free file catalog.

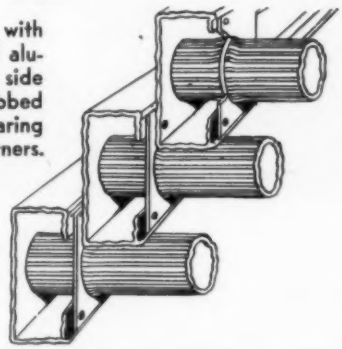
1. SERIES 500 with TUBULAR PRINCIPLE

For service trucks, this great ladder has the strength, lightness, and structural advantages of Duo-Safety's exclusive Tubular Principle. Provides a maximum of climbing space and requires a minimum of banking height. Series 525-A (Three-Section) is illustrated at left. Series 500-A (Two Section), Series 550-A (Wall Ladder) and Series 575-A (Roof Ladder) also available . . . all in a variety of sizes.



2. SERIES 700 — CHANNEL RAIL

For pumper use . . . the 700 Series, with the safety, strength and durability of aluminum, replaces old style, bulky, solid side wood pumper ladders. Has heavily ribbed rungs of extended tubing, non-shearing steel rivets . . . no sharp or jagged corners. Series includes 700-A (Two Section), 725-A (Three Section), 750-A (Wall Ladders) and 775-A (Roof Ladders). All models available in all standard lengths.



3. SERIES 800 — CHANNEL RAIL

Here is the newest Duo-Safety Fire Ladder . . . a companion ladder to the 500 and 700 Series. With the exception of the use of heavier rails, the Channel Rail construction is identical to that of the 700 Series. Exceptionally sturdy all-aluminum construction make the 800 Series an extremely popular fire ladder. The 800 Series includes the 800-A (Two Section), 825-A (Three Section), 850-A (Wall Ladders), 875-A (Roof Ladders) . . . all available in all standard lengths.

DUO-SAFETY LADDER CORPORATION
811 Ninth Street . . . Oshkosh . . . Wisconsin

MODERN HAZARDS demand modern apparatus

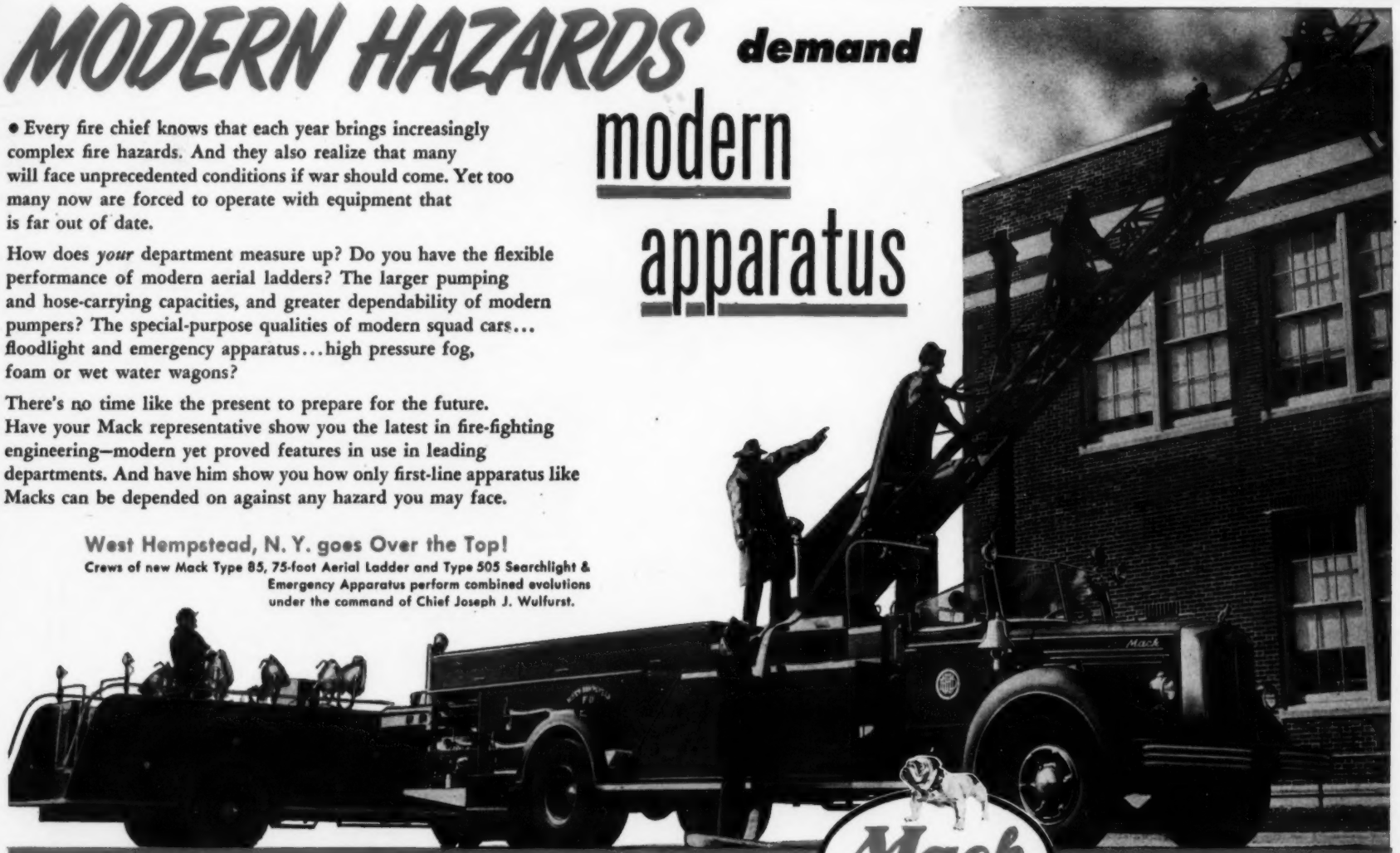
• Every fire chief knows that each year brings increasingly complex fire hazards. And they also realize that many will face unprecedented conditions if war should come. Yet too many now are forced to operate with equipment that is far out of date.

How does *your* department measure up? Do you have the flexible performance of modern aerial ladders? The larger pumping and hose-carrying capacities, and greater dependability of modern pumpers? The special-purpose qualities of modern squad cars... floodlight and emergency apparatus...high pressure fog, foam or wet water wagons?

There's no time like the present to prepare for the future. Have your Mack representative show you the latest in fire-fighting engineering—modern yet proved features in use in leading departments. And have him show you how only first-line apparatus like Macks can be depended on against any hazard you may face.

West Hempstead, N. Y. goes Over the Top!

Crews of new Mack Type 85, 75-foot Aerial Ladder and Type 505 Searchlight & Emergency Apparatus perform combined evolutions under the command of Chief Joseph J. Wulfurst.



modernize with

Mack Manufacturing Corporation • Fire Apparatus Division • Long Island City 1, N. Y.

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TRIPLE COMBINATION PUMPERS—500 TO 1500 GPM...SQUAD AND HOSE CARS...AERIAL, CITY SERVICE AND QUADRUPLE COMBINATION LADDER TRUCKS

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His chances
for LIFE
are better
with the

NEWEST • SAFEST • MOST EFFECTIVE

M•S•A Pneolator

There's new hope for *every* victim of arrested breathing, when you put the new MSA Pneolator into action. Whether the emergency is drowning—electric shock—poisonous or suffocating gases—heart attacks—overdoses of drugs—or any kind of asphyxiation, the chances for recovery are definitely improved because of the many new features provided by this important new life-saver.

Treatment can be started immediately, in all cases. Any pressure required by the particular patient—whether newborn infant or robust adult—can be immediately selected, and is accurately maintained.

The Pneolator administers oxygen with positive pressure at regular intervals, cycling automatically and producing highly effective artificial respiration without "suction." Expiration is effected by the action of the elastic walls of the lungs, and the flexible muscles of the diaphragm and chest. The medically accepted use of intermittent positive pressure without suction in treating lungs swollen by the inhalation of irritant gases further indicates the desirability of the Pneolator in all cases of asphyxia.

As soon as breathing is restored, the inhalator demand valve automatically takes over, delivering oxygen as the patient inhales, and cutting it off automatically as he exhales. No change in mask is involved in the switch, and there is no interference with the rhythm of continuously supplying the life-giving oxygen. An aspirator is provided, for removing any obstructions from the throat . . . making the new Pneolator a complete, triple-function unit.

The Pneolator, complete with half-hour oxygen supply, is housed in a compact, light but strong and easily handled Fiberglas case. A convenient connection permits supplementary oxygen supplies to be attached at any time.

When asphyxia occurs your department needs the extra margin of safety and assurance of recovery offered by the MSA Pneolator. For complete details on this important new Fire Department Life Saving tool, ask for Bulletin No. CH-1 and a demonstration!

NOTE: *The first several minutes after breathing has ceased are the most critical. Immediate application of manual artificial respiration should be started and continued until the Pneolator becomes available.*

MINE SAFETY APPLIANCES COMPANY

BRADDOCK, THOMAS AND MEADE STREETS • PITTSBURGH 8, PA.

At Your Service:

54 BRANCH OFFICES IN THE UNITED STATES AND CANADA

MSA

SAFETY EQUIPMENT HEADQUARTERS

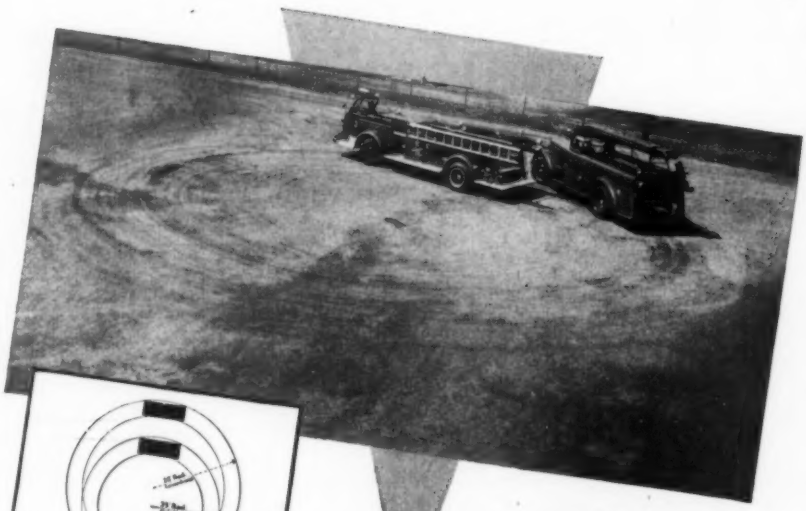
Call the M•S•A man on your every safety problem . . . his job is to help you.

IN AMERICAN-LAFRANCE FIRE ENGINES

THERE'S *Extra Value* FOR YOU · · ·

Shorter Turning Radius means *Easier Handling* in narrow streets and heavy traffic . .

An emergency response is made with greater safety through heavy or congested traffic. Better maneuverability and control is obtained with the short turning radius, easier steering and better visibility provided by the Cab - Ahead - of Engine pumpers. Photograph shows by tire marks on cinders, superiority of Cab - Ahead - of Engine pumper, on short turns.



750 G PM INVADER

● Eighth in a series of advertisements featuring EXTRA VALUE in American LaFrance fire apparatus.

AMERICAN-LAFRANCE-FOAMITE CORPORATION
ELMIRA, NEW YORK, U. S. A.
LAFRANCE FIRE ENGINE AND FOAMITE LIMITED
TORONTO 9, ONTARIO, CANADA

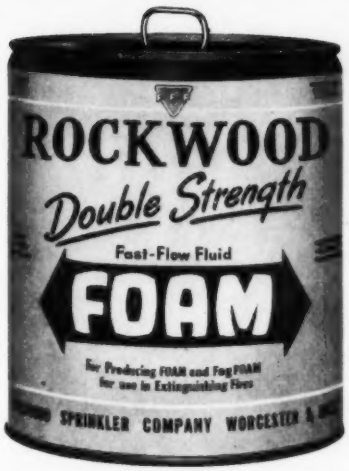
NEW ROCKWOOD FOAM LIQUID
NEW ROCKWOOD FOAM DEVICES
NEW ROCKWOOD METHODS
for APPLYING FOAM TO Gasoline Fires

New Rockwood *Double Strength* FOAM Liquid and FogFOAM devices enable fire fighters to cover burning surfaces faster with a blanket of FOAM that completely seals off combustible vapors. The FOAM blanket will quickly reseal if broken by trucks, hose, foot tracks, etc. The new Rockwood method of applying FOAM to fires involving oil, gasoline and other flammable liquids and materials will extinguish fires with far greater speed and with less work than with old style methods. Rockwood FOAM is designed to give you the most efficient results in fire fighting and to protect apparatus from damage. For complete operating and installation data and prices, write today.

The most efficient way to apply Rockwood FOAM Liquid and wetting agent to most fires is thru Rockwood fire fighting devices.

ROCKWOOD

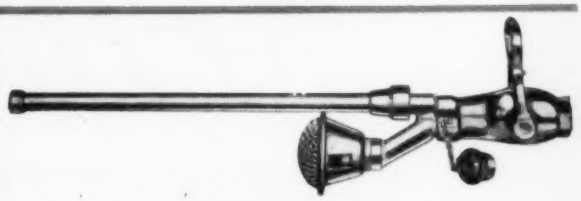
ROCKWOOD SPRINKLER CO.
54 Harlow St., Worcester 5, Mass.
Portable Fire Protection Division



1. Rockwood's new FOAM Liquid produces FOAM and FogFOAM for use in extinguishing flammable liquid fires. It can be automatically mixed with water supplied to the new FFF FogFOAM Nozzle or to the new "FF" Extension by means of the hose line FOAM Eductor — or Rockwood FOAM proportioning systems built into fire trucks. Rockwood regular FOAM is still available for use with Rockwood devices.

2. New *Lightweight* type FFF Rockwood FogFOAM Nozzle with FogFOAM screen. Available in three sizes for service on 1½" and 2½" or 3½" hose. Discharges (1) FogFOAM (with FogFOAM screen) (2) Solid FOAM stream (with FOAM shaper) (3) High velocity WaterFOG pattern.

3. Rockwood FOAM Eductor introduces FOAM Liquid into fire hose lines for use with Rockwood Type FFF FogFOAM Nozzles or "FF" Extension units with SG-60 Nozzles. Eductor can be attached between discharge of fire truck and fire hose line, connected between hydrant and hose line or between two lengths of hose. Separate models are available for FOAM and water wetter.



4. Rockwood *Lightweight* "FF" Extension unit with SG-60 WaterFOG Nozzle attached. The "FF" Extension can be easily attached to a ¾", 1" and 1½" SG-60 WaterFOG Nozzle by simply removing high velocity WaterFOG tip and inserting "FF" Extension. This unit discharges high velocity FogFOAM thru FOAM screen or long range solid FOAM stream thru FOAM shaper — also high velocity WaterFOG, solid water stream or low velocity WaterFOG.

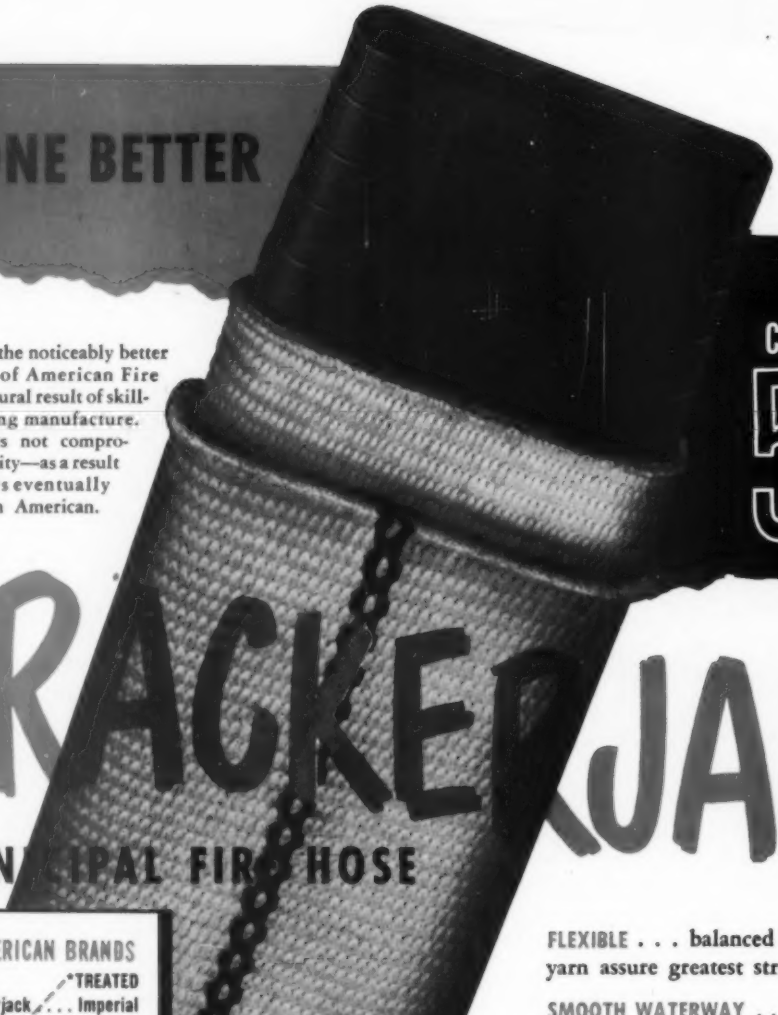
NONE BETTER

. . . the noticeably better performance of American Fire Hose is the natural result of skillful, painstaking manufacture. American does not compromise with quality—as a result critical buyers eventually standardize on American.

LAMINATED CONSTRUCTION 5 . . . calendered sheets

CRACKERJACK

MUNICIPAL FIRE HOSE



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FLEXIBLE . . . balanced weave and premium yarn assure greatest strength and flexibility.

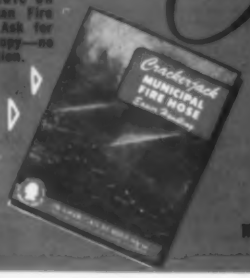
SMOOTH WATERWAY . . . lowest possible friction loss.

DEPENDABLE . . . unsurpassed for ruggedness and long life.

LOWEST COST PER FOOT PER YEAR

ASK FOR BULLETIN

Descriptive literature is available on American Fire Hose. Ask for your copy—no obligation.



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THE AMERICAN RUBBER MFG CO. OAKLAND CALIF.

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NOW! a two-in-one fire fighter

Versatile John Bean H. P. V. gives High Pressure Fog and Volume at the same time!

500-, 600-, and 750-G.P.M. capacities. Complies with Fire Underwriters' requirements for capacities claimed.

The new H.P.V. Fire Fighter is the complete answer for protection against all types of fires. Bean High Pressure Fog unit gives you five important fire-fighting exclusives: (1) Carries own High Pressure water supply; (2) puts out fires faster; (3) clears the way for close-in work; (4) minimizes water damage; and (5) requires fewer men to operate. Write today for all the facts about the John Bean H.P.V. Fire Fighter.

Another innovation by the manufacturers of

Get all the benefits of High Pressure Fog plus these new volume pump advantages:

TROUBLE-FREE PUMP OPERATION—Rugged, solid case multiple-stage pump eliminates out-of-alignment bearings, reduces chances of pump failure. Operates simultaneously with High Pressure or alone.

FIRE PROTECTION—WHEN YOU NEED IT—John Bean volume pump handles up to 3 hose lines. Famous High Pressure pump supplies 2 High Pressure Fog lines.

FOOLPROOF AUTOMATIC PRIMING—Initial pump draft established quickly, automatically.

WATER COOLING LENGTHENS LIFE—Water-cooled gear case protects vital moving parts from damage by friction heat.

SIMPLIFIED MAINTENANCE AND REPAIR—Impellers and other pump parts easily accessible from underneath chassis *with no dismantling of pump housing.*

MAXIMUM PUMP PROTECTION—Midship mount protects pump from accidental collision or freezing.

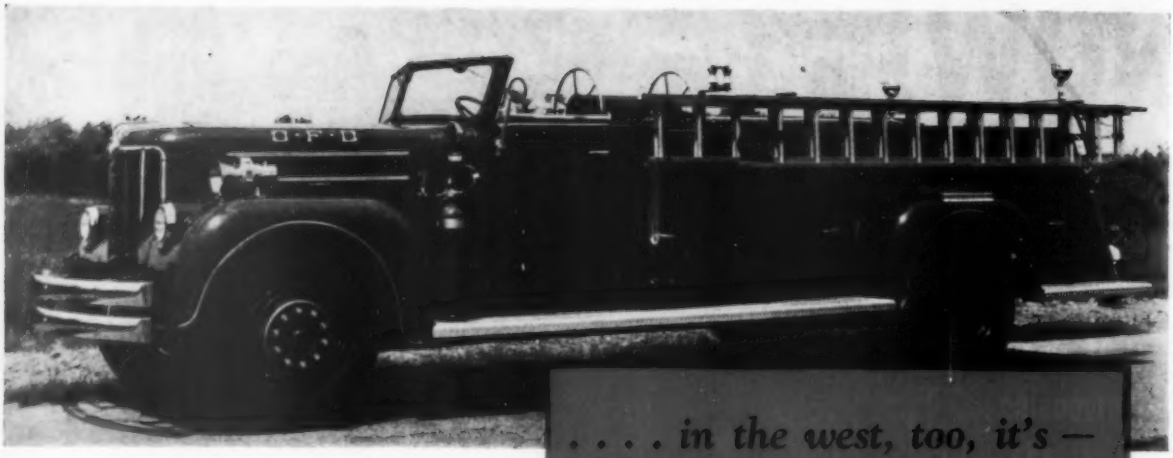
BEAN *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY AND CHEMICAL CORPORATION

JOHN BEAN DIVISION, DEPT. 126, LANSING 4, MICH. • JOHN BEAN DIVISION (WESTERN), 409 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS



. . . . in the west, too, it's —

MAXIM

City of Oakland, California (2) and Salt Lake City, Utah

Recent deliveries and orders include . . . . . .
Portland, Oregon 4
Kings Cty, Washington 3
Snohomish, Washington 2
Ripon, California 2

We build a complete line of fire apparatus. Pumpers from 500 to 1500 gals.—squad and rescue trucks—all steel aerials, 65'—75'—85'.

MAXIM MOTOR COMPANY

MIDDLEBORO, MASS.

Americas Finest Fire Apparatus

Mother Watches as Son Is Rescued From Brink of Death
4 Children Are Saved From Fire
Firemen Assist In Reviving Accident Victim
Resuscitator to Aid of Youth
Resuscitator Saves Elgin Girl's Life
Police Revive Asphyxiated Children
Resuscitator Saved Babe's Life
RESUSCITATOR USED TO AID 4-YEAR-OLD GIRL
Resuscitator Squad Saves Ripon Boy
Tots Overcome By Deadly Fumes, Both Revived
Fire Crew Revives 7 Week-Old Local Girl
Firemen Praised For Saving Child
Kelso Family Of 6 Misses Death By Asphyxiation

TYPICAL SUCCESS STORY

...when your Rescue Crew is aided by an E&J RESUSCITATOR

E&J RESUSCITATOR • ASPIRATOR • INHALATOR

IS YOUR BUDGET S-T-R-E-T-C-H-E-D?
Let your community *share in the satisfaction* of saving human lives... *their* lives, perhaps... by obtaining modern E & J Resuscitators for your Department through fund-raising programs.

Get set for the
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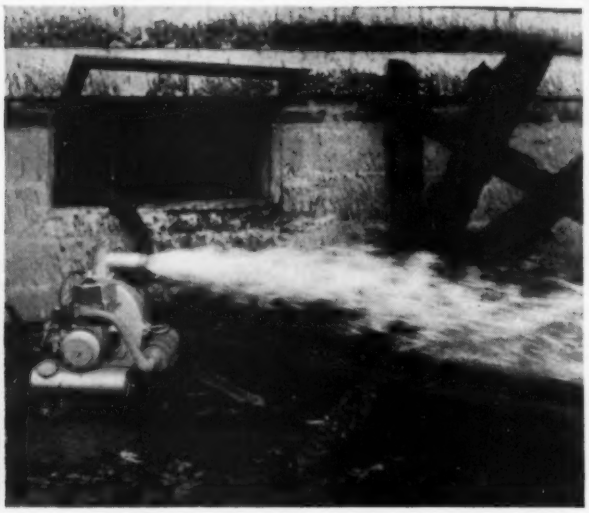

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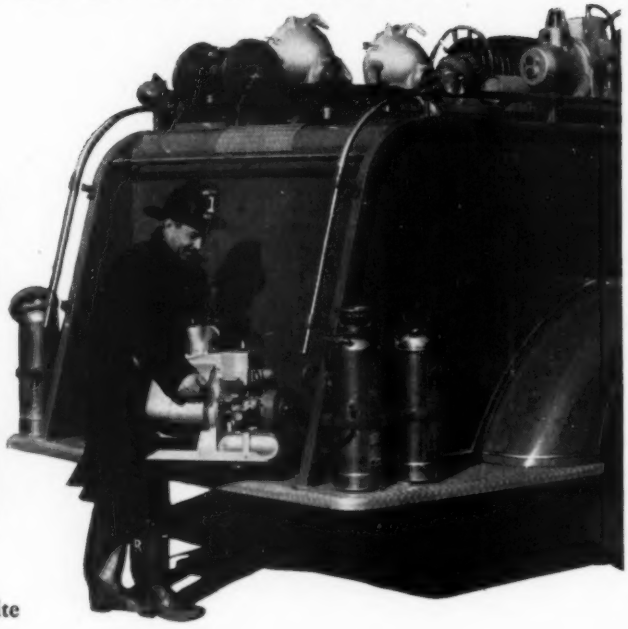

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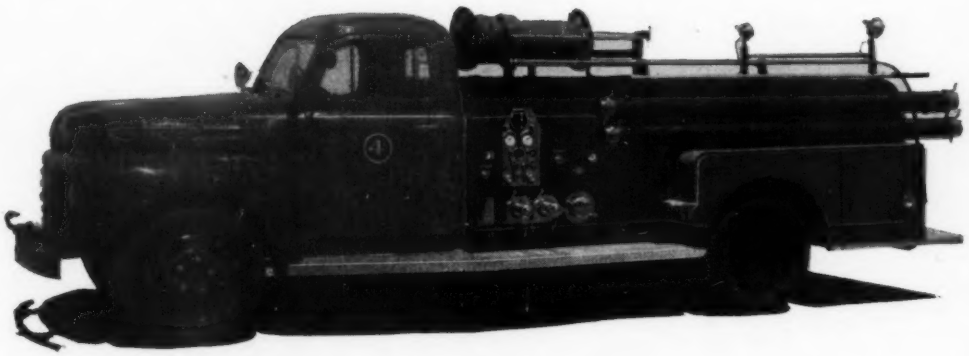

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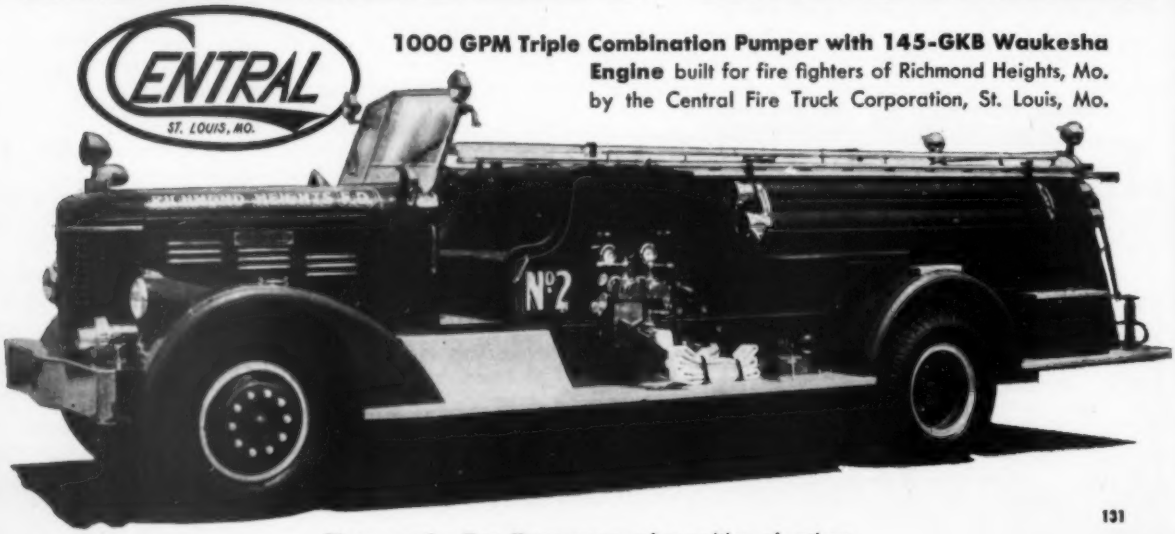

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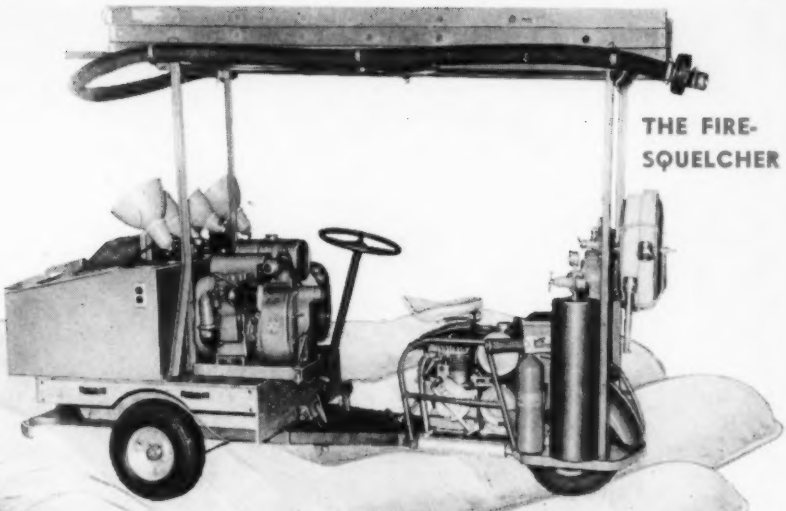
YOU'RE THERE WITH THE....



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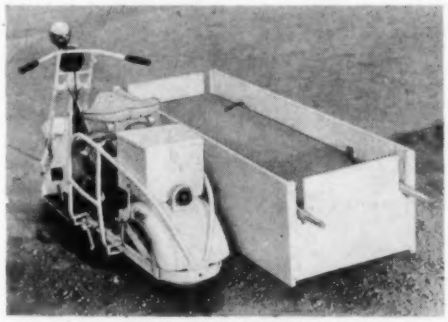

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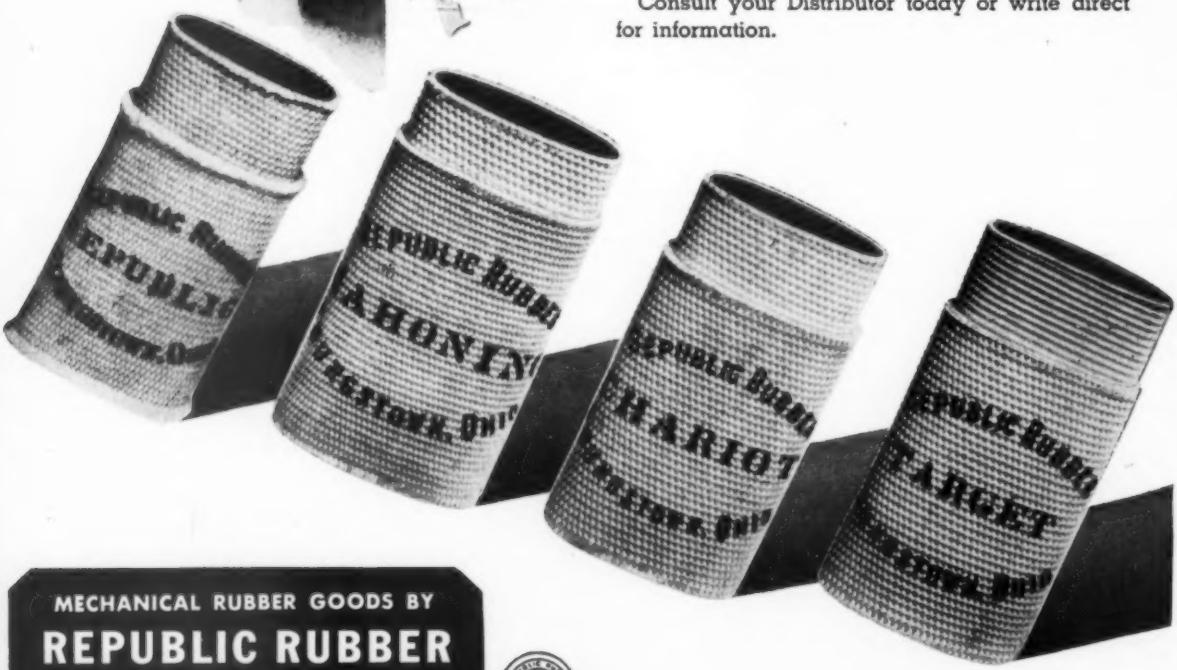

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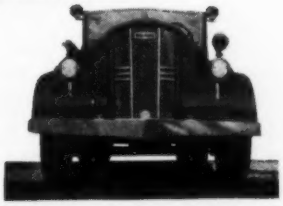
Now is the time to obtain the new, colorfully-illustrated Ward LaFrance bulletin that gives you full details. Then, when you're ready to replace apparatus, you'll have all the facts at hand. Write Ward LaFrance today — now!



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American FIRE ENGINES....BARTON SUPER-FOG EQUIPPED

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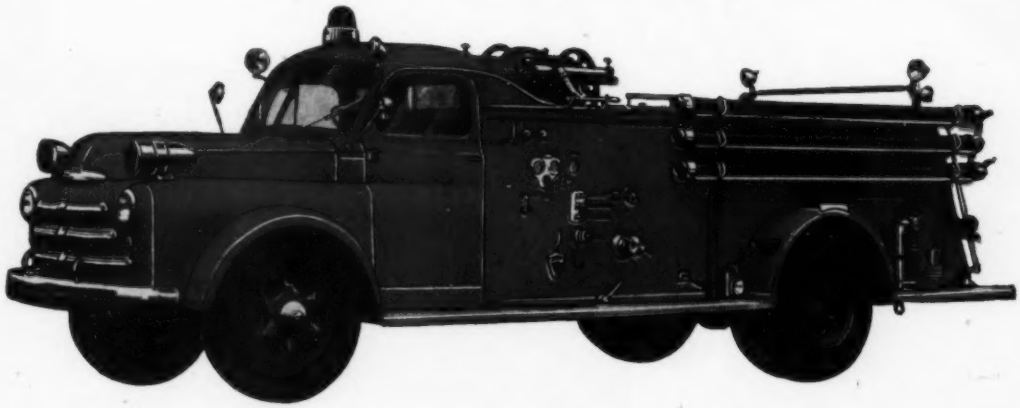
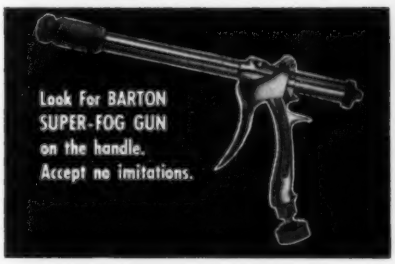


BARTON SUPER-FOG equipment, most modern and effective fire-fighting fog known, is standard equipment on every AMERICAN fire engine. Designed to lay down a perfect fog blanket at various ranges, it will extinguish a tremendous amount of fire with perfect ease of control. Developed and manufactured in our own plant, it is recognized as the most effective small fire fighting stream.

This development, plus exceedingly careful control of material and workmanship in every detail of fire engine construction, means that every dollar of your equipment appropriation gives you more fire fighting power and extra dependability when you invest in AMERICAN. Write for descriptive literature and name of your nearest representative.



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- **YOUR SELECTION OF A WIDE VARIETY OF PUMPS.** Front mounted single-stage and midship mounted two-stage duplex pumps, furnished as standard, easily develop all the pressure required to produce Barton Super-Fog, most effective of all small fire fighting streams. For those who are inclined to use up to 800 lbs. pressure, we have a duplex three and four-stage midship mounted pump with which the Barton Super-Fog gun (with a minor adjustment) is also most effective.
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JUNE, 1951

FIRE ENGINEERING

VOL. 104, NO. 6

With the Editor

Signs of the Times! An announcement of profound import not only to the world's largest fire department but to the nation's fire service was made in May by New York's Fire Commissioner George P. Monaghan. It was to the effect that, beginning in July, his department will begin receiving 400 modern gas masks. Another 400 will be purchased when funds are available, eventually providing the department with at least two masks for each piece of fire apparatus in service.

The step is the culmination of many years of effort to secure this essential protection for a fire force which, at best, has had only limited respiratory protective facilities. Actually, as of May 1, 1951, it is said the department had only 182 masks of all types which were carried by the fire rescue companies and in the automobiles of division and battalion officers. No ladder and engine companies were so equipped nor were but very few of the city's 10,453 firemen ever given full training and instruction in the use of such equipment.

The decision to equip New York with this protection is another forward step in the rehabilitation of this great department now taking place under the recently appointed Fire Commissioner Monaghan, and Chief of Department Loftus. Needless to say, the move has the enthusiastic support of the city's uniformed fire officers and firemen's associations, which have campaigned actively for the step. The decision is even more interesting in view of the fact that it was made by the Commissioner in the face of a veto by Governor Thomas E. Dewey of a bill passed by both houses of the State legislature which would have made mandatory the installation of masks in every municipal fire department (the governor's veto, it is said, was based upon confusion over the terminology of the bill, not the purpose for which the measure was introduced. It is understood that when rewritten the Bill will have his approval in the next legislature).

The addition of the first 400 masks is of course only the start, but it will make available, as the Commissioner points out, at least a minimum of five masks at every fire, inasmuch as at least three pieces of apparatus and a chief's car respond to every full alarm. Measured by many other municipalities, both in this country and abroad, which believe in providing "a mask for every man" on the apparatus, New York still has a long way to go. For example, consider Copenhagen: that city's fire department of 692 men, serving a population of 757,000 people, in a 29 square mile area, has 702 breathing apparatus units. On this basis the New York Fire Department should have 10,557 units. However, compared with the past, the innovation is significant, as is the department's present campaign of thorough training in the maintenance and use of modern type masks.

New York, like other cities that have made this same decision to use masks as regular equipment, will find their addition far-reaching. Last year approximately 11,000 persons in this country lost their lives by fire. Tragically enough, not a few of these were members of the fire service killed in line of duty. The majority of these fatalities were not from burns but were the direct result of inhaling the gases of combustion, in many cases superheated to high temperatures. Call it smoke narcosis, smoke or gas poisoning, or plain suffocation, the simple fact is that more people, including fire fighters, die from these factors than from burns.

How many of these fatalities might have been prevented had proper respiratory protective equipment been available is of course only conjecture. But every fireman can speak from intimate experience on what masks would have meant to him at some time!

How many lives will be saved by the addition of this essential facility to modern fire control and rescue likewise cannot be prophesied. But one thing is certain, not only will New York firemen save more lives, but they will have to endure far less punishment while doing it. The net result will be profit to the city far beyond the trifling cost of the improvement.

By enabling the city's fire fighters to penetrate smoke and fume-filled occupancies, to locate the heart of a fire and to knock it down before it can spread to serious proportions behind the protective pall of heavy smoke, attack will be speeded, with resultant lowering of fire losses, and lessened punishment for firemen. By making it unnecessary to await the arrival of rescue companies when such equipment is needed, miles of travel and hours of labor of the busy rescue squads will be saved. The use of masks in every company will hasten and make more effective the size-up of threatening fires or other serious emergencies.

Fred Sheppard

Fabulous Levittown Creates Modern Department Overnight

How Nation's Fastest Growing Community is Protected by Most Unique, Fastest Growing Fire Force

A SPECIAL REPORT BY CHIEF JOHN J. CASHMAN

Editor's Note: The cold afternoon of December 23, 1948, found first grade Fireman John J. Cashman of the New York Fire Department on his way to his newly-acquired home in the rapidly growing development known as Levittown, Long Island. Suddenly his meditations on the Aladdin-like community and his home were disturbed by shouts of "Fire" from a nearby house. Responding "on the button" Cashman was greeted by the sight of heavy smoke issuing from the rear windows of a dwelling, through which an excited neighbor was directing a well-meant but ineffectual garden hose stream.

Taking over from the villager, Cashman made entry and controlled the blaze, which by now had involved the entire rear of the cottage. This was before any apparatus and firemen arrived.

From this incident arose an idea which was to lead through two years of organization, trouble and toil to the establishment January 1, 1951, of one of the largest, most completely equipped fire departments ever to be commissioned at one time rather than to grow by gradual steps in this country.

What may be termed the second stage of this story began with the visit of Fireman Cashman to the offices of FIRE ENGINEERING soon after the above incident. In substance, what Brother Cashman wanted to know was how do you go about organizing a volunteer fire department?

What followed—how John Cashman and a few kindred souls pursued an idea and nourished it to fruition is a fascinating page in the annals of the American Fire Service.

By rights, this could well be the story of Fireman Cashman, member of an illustrious family identified with the New York Fire Department since its inception, and of certain of his fellow fire fighters who work in the "big city" but fight fires both there, and as members of the Levittown Fire Department. However, they want no mention, no credit for their part in building the strictly volunteer organization that is the basis of this account.

IN the past two years much has been printed and said about Levittown, L. I., N. Y., the fabulous community that grew from a potato farmland to a city of some 55,000 persons in the short span of three years. The rapidity of its growth can be likened to the boom towns of gold rush days but, unlike them, Levittown is a planned residential development of modest one-family homes set on winding streets with modern schools, shops, churches, parks, playgrounds and even swimming pools to complete the pattern for a leisurely suburban way of life.

Shopping centers, known locally as Village Greens, are scattered throughout the area. A five million dollar shopping center, known as Levittown Center, is rapidly nearing completion on Hempstead Turnpike. This, when completed, will be the largest project of its kind in the east. Nearby, The Center Island Shopping Park is running a close second as far as huge stores are concerned. Nationally known chain stores such as J. C. Penny; Woolworth's; W. T. Grant; Kresge; A. & P.; Food Fair; Grand Union; Safeway; Walgreen, and Whalen have already leased and occupied space with more due to follow.

Levittown Department's Board reviews station plans. Looking over plans of new fire headquarters are (standing, left to right) Commissioners Robert Dickinson, William Walsh and Howard Haggerty; Treasurer Warren Grant; Architect W. Thomas Schardt. Seated are Commissioners John J. Cashman and Arthur Pfeifer.

The duty of providing fire protection for this sprawling suburban metropolis rests presently with six fire departments namely Wantagh, East Meadow, Westbury, Hicksville, Bethpage and last but not least, the newly established Levittown Fire Department. It is the latter organization with which this article is concerned, first, because it bears the brunt of fire protection in Levittown, having more than half of the present area of the community and virtually all of the business district within its district boundaries; secondly, the Levittown Fire Department is one of the largest fire departments ever to be created at one time in the United States. The only notable exceptions were those departments created to provide fire protection for armed force bases during World War II.

At one time the greater portion of what is now Levittown was a farming area devoted principally to the growing of famous Long Island potatoes. From a fire protection standpoint, it was a "no-man's land" until just a few years before Levitt & Sons, a Manhassett, L. I., building firm, conceived the idea of what is now the largest development of its kind in the country. At that time, the Hempstead Town Board, in an effort to provide fire protection for the area, created the North Wantagh Protection District and entered into contracts with the East Meadow and Wantagh Fire districts to furnish fire protection for the section at a certain yearly rate. This system continued until January, 1951, although by August of 1948 it was obvious that other arrangements would have to be made if adequate fire protection was to be provided.

During the early part of 1949, New York City Fireman John J. Cashman, with other interested citizens of the community who had a firemanic background, banded together to secure that protection. Various courses of action were discussed but it was finally decided that the only workable plan was to seek creation of a new fire district which would have tax powers that could finance purchase of land, apparatus, equipment, construct fire stations, provide an alarm system and train the necessary personnel.

Originally the idea was to embrace all of Levittown into a single fire district, but that had to be discarded because of pressure from long established fire districts, naturally jealous of their boun-

The volunteers demonstrate technique to public. As part of drive to interest public and gain support for the new department, Levittown vamps staged a public exhibition during Fire Prevention Week.

daries. From a standpoint of efficiency it is obvious today that this would have been the best arrangement. However, it was soon learned that efficiency in the fire service must at times bow to tradition. Consequently, it was decided to seek merely to change the North Wantagh Protection District to a new Levittown Fire District.*

Four Fire Forces Originally Furnished Fire Protection

A preliminary report was drawn up by the committee, which became part of the Levittown Property Owners' Association, and was printed by a local bank. This report set forth the fact that there were then some 9,000 homes in the area (since increased to 15,000). At that time Levittown was being furnished protection by four communities in the area, namely East Meadow, Hicksville, Bethpage and Wantagh. The two fire departments covering the largest portion were from towns of less than 2,500 each. There were no fire alarm boxes and a call to any one of the four districts required a toll call through two telephone exchanges. First-due responses necessitated runs of over five miles, and several instances of delayed alarms and response resulted.

In October of 1949 the group, which had by then become known as the Fire Protection Committee, started to collect signatures on the required petition to the Hempstead Town Board and to lay the groundwork necessary to acquaint officials with the proposal, which included the purchase of apparatus, the training of some 200 volunteers and the erection of suitable quarters. This involved several months of discouraging toil, during which many speeches were made and the aid of several local organizations enlisted.

Several fires, however, pointed up the situation in effect, and furthered the Levittown group, especially after it was announced that after formation, the Levittown Fire Department would gladly take all fire calls, determine from their up-to-date charts the district involved, notify them, and respond with one pumper if apparently needed. Much favorable sentiment was aroused by this promise, which incidentally has been fulfilled 100 per cent.

Legal obstacles placed in the way by a group of dissident taxpayers held things up for awhile but, by September 14, 1950, the necessary petitions, votes and elections were completed and the property owners by a vote of 553 to 27 approved a bond issue of $350,000 to finance the district. Meanwhile a Board of Fire Commissioners had been appointed, consisting of Howard C. Haggerty, Chairman; William Walsh; Robert Dickinson; Arthur Pfeifer and John Cashman. The Board immediately set about the task of drawing specifications for apparatus, buildings and alarm system. It also secured some apparatus for the training program.

There was much enthusiasm in this all-veteran town when a series of Sunday morning training sessions were inaugurated. Having been a Navy fire-fighting instructor during the war, Cashman was named Training Director. Of inestimable help in conducting this program was a training squad consisting of other former Navy instructors, several municipal firemen and former volunteer firemen from other Long Island communities, all of whom now call Levittown home.

Every training effort was made to simulate actual fire conditions and, at the conclusion of the program, a public demonstration was arranged during Fire Prevention Week. The highlights of this show were a number of oil pit fires and as a finale, a careless "drunk" tossed a cigarette into a frame shack, the alarm was given and the newly trained fire fighters "rolled in" and did a fast job of knocking down the fire, which had been coaxed along with some gasoline and oil. Indoor lectures, accompanied wherever possible, with moving pictures, were held during evening sessions in the auditorium of a local school.

Among those who took part in this phase of the training program were Deputy Chief Hugh A. Halligan and retired Deputy Chief William H. Taubert of the New York Fire Department; Fire Marshal Wilbur Seaman of the Hempstead Fire Department; Fire Marshal George Clough and Deputy Fire Marshal Peter Lynch of Nassau County; Chief Milton Fisher, Mitchel Air Force Base F.D., and Francis L. Brannigan, Safety Section, Atomic Energy Commission. In order to provide the embryo "volunteers" with more "know how," trips were made to the Training and Proving Grounds of the New Haven, Conn., Dept. of Fire Service and to the Aircraft Fire Fighting School at Mitchel Air Force Base.

Apparatus Contracted For

Contracts were let for two 750-gallon pumpers, equipped with 300-gallon booster tanks and Multiversal deluge guns. Also, on order is a rescue truck which will include a 500-gallon pump,

Wantagh and Levittown forces fight fire in First Baptist Church.

*Under New York State Law a Protection District cannot have its own fire department but, through the Town Board, contracts for fire protection; whereas a Fire District is administered by a Board of Fire Commissioners who have the right to create and administer a fire department with money obtained by taxation at a rate determined by the Board.

a 500-gallon booster tank, in addition to a sixty gallon foam tank and a twenty-gallon tank for wetting agents. A built-in dual proportioner, floodlighting equipment, deluge gun and rescue tools will be carried. Ladder service will be provided by a fifty-five foot junior aerial ladder with ladder pipe, 500-gallon pump and small booster tank. A chiefs' car completes the new apparatus for this tailor-made fire department.

The original used apparatus, procured for the emergency will be kept in reserve for use as spares and training rigs or for fire duty during extreme fire conditions.

A Modern Alarm System

Telephones will provide the principal means of giving an alarm, although a contract has been awarded to install boxes in the shopping areas, at churches and schools, with more boxes to be added as funds permit. Air horns will be used to transmit the box numbers, one of which has been assigned to every intersection in the district. All apparatus and the chiefs' car will be equipped with FM radio, as will the sub-station and eventually the homes of most volunteers. Three paid dispatchers are on duty at all times; they also provide maintenance service for the house and apparatus. The department is included in the Nassau County Mutual Aid System.

Last Word in Fire Stations

The Central Fire Station, which should be completed in early fall, will have a three-door apparatus room, alarm room, offices, assembly hall, recreation and lounge and all facilities for recreation and business. The Central Station will be of modernistic design as are other buildings in the business area. The sub-station, which was designed to conform with dwellings in the residential area in which it is located, will have room for regular and reserve apparatus as well as a recreation room, kitchen and toilet facilities.

Miscellaneous Equipment

Although it is a volunteer force, few departments in the country will be as well equipped as the Levittown Fire Department when everything that has been contracted for is in operation. As an example, each apparatus will carry four self-contained masks, dry powder extinguishers, liquid foam, high and low velocity fog equipment and the rescue truck will be able to provide wet water and fog-foam. This same unit will be equipped to perform any task from cutting bars off a window to lifting a railroad car that has been wrecked. Drownings in any of the numerous recharge basins or swimming pool will require the use of the shallow water diving gear that will be carried.

Modernistic Headquarters Station of the Levittown Fire Department.

Present Operations

In order to meet a deadline of 12:01 A. M., January 1, 1951, it was necessary to construct a temporary firehouse on the side of the ultimate Central Station. The department makes use of two 1000-gallon pumpers and a service ladder truck. The ladder also doubles as a rescue unit and in addition carries 500 feet of 1½-inch hose for a hydrant line in the event of simultaneous calls. Commencing operation on January 1 last, the department responded to twenty-one calls in January; twenty-eight in February, and March responses averaged one a day, ample proof of the need of an expanded fire force for the newly developed sections.

Future plans include creation of a training ground complete with drill tower, concrete block structure in which simulated dwelling fires can be fought, and facilities to fight simulated fires in an auto, airplane, oil tank truck, open pits, electric transformer, and a household oil burner. Establishment of a fire prevention program and extension of the alarm system are also high on the priority list in future planning for this fire department that less than a year ago was non-existent.

Unfortunately, Charles Sloat, formerly of the Vigilant Fire Co., of Great Neck, L. I., and some of the other men who were instrumental in laying the groundwork for the creation of the Levittown Fire Department, have either moved away or find the pressure of personal business too great to continue the great civic work they began, but by and large those that trudged from door to door getting signed petitions were instrumental in starting the Levittown Volunteer Firemen's Association (the name used by the group before the actual creation of the fire department) and now form the hard core of what supporters hope will some day be the finest volunteer fire-fighting organization in the country. Presently the department is headed by Chief John J. Cashman, Deputy Chiefs Martin C. Wilkens and Gus Olsen. Recently Rev. Thomas O'Brien, St. Bernard's R. C. Church; Rev. Samuel Scales, Levittown Baptist Church, and Rabbi Saul Leeman were appointed Department Chaplains. Dr. Melvin Smolley is the Department Surgeon. Each of the four companies is headed by a Captain and two Lieutenants. The allowed strength of the department is 200 men and the department secretary, Paul Barnhill, is currently establishing a waiting list.

Although about sixty per cent of the department had no previous fire-fighting experience or training, among the personnel are former volunteer firemen from many Long Island communities as well as those from as far away as Maryland, Ohio, Maine, Wisconsin and Texas. Another very valuable group are made up of former servicemen who served in fire-fighting units ashore and afloat during the war. But perhaps the most unusual group to be found in this unique volunteer fire department is the dozen or so municipal firemen who commute to the "big city" every day, work with fire companies in the heart of the high hazard districts, and then as an avocation return to Levittown to lend their experience (and gain some) with this most unusual of volunteer fire departments.

It might also be mentioned that in the latter aggregation are to be found men ranking as high as captain in the N.Y.F.D. All of them have an average of ten years' experience, with two having more than twenty years as professional firemen.

Although the Fire Department dispatcher notifies the Nassau County Police on all alarms, there is within the department a fire-police unit whose members take post at busy intersections of the busy town to speed up the response of apparatus and establish fire lines in conjunction with the County Police. The Lieutenant in charge of this unit is a former New York State Trooper and several of his men are police officers with the United Nations and other police organizations.

Station No. 2 of the Levittown follows the architectural motif of the residences which the company protects.

London Salvage Corps Averages Three Thousand Alarms a Year

By PAUL C. DITZEL

This article is the first of a series on European fire techniques prepared especially for FIRE ENGINEERING by Paul C. Ditzel, Chicago and Buffalo correspondent for FIRE ENGINEERING. Mr. Ditzel recently returned from a three-month visit to 11 European countries in company with six other newspaper writers. Mr. Ditzel, formerly with the Buffalo *Evening News*, now is with the Chicago Bureau of the Associated Press.

FIRE salvage work in the London, England, area is handled by the London Salvage Corps which, like its United States counterparts, is sponsored by fire insurance companies who pro-rate the cost of salvage operations.

Headquarters of the Salvage Corps are at 64 Watling Street near famed Fleet Street—"Newspaper Row"—and close by the shadow of St. Paul's Cathedral, which miraculously escaped bomb damage during the London air blitz.

The history of the Corps closely parallels that of most American fire insurance patrols. British fire insurance companies separately began their own fire departments more than two centuries ago, when the city fire brigades then in existence could not satisfactorily extinguish fires with a minimum of smoke and water damage.

Like their counterparts in the United States, the London Salvage Corps predates the municipally operated fire departments. After a number of British insurance companies began operating their own fire departments, the companies eventually decided to pool their resources and amalgamate their brigades.

This consolidation came in 1832 when the London Salvage Corps was born in spirit if not in actual name. At 68 Watling Street today are record books dating back to 1832—mementoes of a day when the science of fire control and extinguishment was not as advanced as it is today.

Fire Fighting Discontinued

In 1866, after establishment of a Metropolitan Board of Works in the London area, the insurance companies gave up the fire-fighting end of the business. Thereafter they concentrated their efforts on salvage work and turned over their fire-fighting equipment to the infant London Fire Brigade. Soon after, the name London Salvage Corps was first used.

In its history the Corps has responded to more than 200,000 fires in the greater London area.

By the time World War II rolled around, with its attendant London Blitz, there was an unprecedented fire problem in London—one that probably has been unprecedented in the world. In 1941, to cope with the need for augmented salvage corps work to minimize the effects of incendiary raids, arrangements were made for fire service personnel to be trained in salvage operations by members of the Salvage Corps.

During the war the Salvage Corps often had to give up any hope of performing salvage work and join with their heroic London Fire Brigade comrades to battle the fires caused by the Nazi bombers.

One fire officer told this FIRE ENGINEERING correspondent that some of their responses during an air raid would take them five or six miles from their station to attend a serious fire. En route to the fire they would pass "dozens and dozens of fires" which were of second alarm proportions or better.

Citizens would run into the street signaling them to stop, but the salvage rigs, which carried portable pumps attached to the back end, continued to the fire ground to which they were ordered.

The Watling Street headquarters station escaped serious damage when a 500-pound bomb smashed a building directly across the street. Windows and doors of the Watling Street station were pushed in, but no other serious damage was suffered by the Corps. The two other stations, located at Islington and Southwalk, escaped damage during the blitz nightmares.

The Watling Street station automatically turns out with a short stubby rig (see Fig. 1) on all alarms within a three-mile radius of the station. The rig, known as an immediate turnout appliance, carries an officer, a driver, and two men. This turnout is comparatively new to the Salvage Corps, which is now experimenting with this reduced first response. Corpsmen theorize it is better to keep a large reserve force at headquarters. The three stations are so located that a salvage rig can be on a fire scene within a few minutes of a call for additional salvage help. There is no automatic change of quarters when one station is emptied for a large fire in its sector.

The officer in charge of the immediate turnout appliance telephones the Salvage Corps' control board within five minutes after he has left the station. If more help is necessary a larger, more fully equipped rig (see Fig. 2) responds.

The salvage rigs in the other two stations respond only to specified risks in their districts and go to other alarms only on receipt of the London Fire Brigade fire chief's radio message for help which is relayed to the London Fire Brigade fire control office.

All calls to the London Brigade are relayed to the switchboard of the Salvage Corps. The Brigade calls the Salvage Corps after it has dispatched its own equipment. They also notify the

Fig. 1. Officers and Crew of the Short, Stubby "Immediate Turnout Appliance" of the London Salvage Corps. This Compact Appliance, Recently Placed in Service, Automatically Responds to All Alarms Within a Three-Mile Radius of the Watling Street Headquarters Station. Note the Ladder Mounted on Its Roof

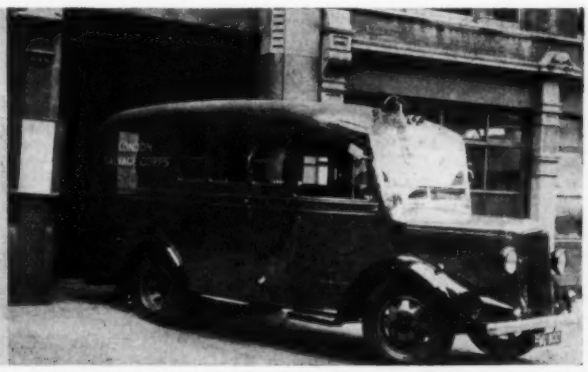


Fig. 2. This London Salvage Corps Appliance Responds to Calls for Assistance by the Smaller "Immediate Turnout Appliance." This Rig Is Held in Reserve for Fires Which Cannot Be Handled Singlehandedly by the Smaller Rig. This Apparatus, Like All Others of the Corps and the London Fire Brigade, Uses Only a Bell and Colored Lights for Warning Traffic

Salvage Corps of all messages which the officer in charge of the fire radioes or telephones back to the Fire Alarm office.

The town of Middlesex, just outside of London, calls the Salvage Corps on all alarms on which the corps would most likely attend if the fire is of sufficient proportion to warrant a turnout.

The Salvage Corps, which receives 15,000 calls a year from the nine fire brigades in the greater London area, has direct telephone lines to the London Fire Brigade Headquarters at Lambeth Walk, and to the Middlesex Fire Brigade. The Corps also responds to fires in the counties of Middlesex, Essex, Kent and Surrey. Other brigades within striking distance of London, telephone the Corps if assistance is required. The Corps also has working arrangements with the fire brigades of the county boroughs of Croydon, East Ham, and West Ham, and the county of Hertfordshire.

Chief Officer of the London Salvage Corps is A. S. Pratten. He was on annual furlough when this FIRE ENGINEERING correspondent visited the Corps. Mr. R. J. Morgan, Superintendent of the Salvage Corps, cordially received the writer and together with Station Officer R. V. Seels gave generously of their time in explaining the operations of the Corps.

Answered 2,288 Alarms

Mr. Morgan said the Corps in 1949 responded to 2,288 alarms and worked at 659 of them. Equipment of the Corps traveled 40,117 miles in performance of salvage duties. The fire brigades in the greater London area rode to 19,617 actual fires, apart from false alarms, chimney fires, and special service calls.

The Corps in 1949 spread 5,115 sheets to protect contents of fire buildings and cleaned and oiled machines at 1,130 responses and 144 fires. There were 303 occasions where tarpaulins were used for roof repairs. The Corps also reinstated 80 sprinkler systems and fitted 233 new sprinkler heads.

Number of turnouts per day of course is an academic question. The Corps, however, records that on five days during 1949 it had only one run. But this jumped to 14 fire attendances on one day —the highest number of attendances during a 24-hour period in 1949. The median seems to be between five and seven responses a day.

As of December 31, 1949, the Corps had seven salvage rigs, two of 1937 model; two of 1942, and one 1943 model. They also had two light vans, one chief officer's car, and three portable pumps. Chief Pratten's annual report lists 912 salvage sheets on hand.

The equipment is staffed by one superintendent, two district officers, nine station officers, three leading salvagemen, 47 salvagemen and 20 auxiliaries, or total of 82 men. The Corps is having difficulty recruiting suitable manpower for the job of salvage work in the London area. Salvage corpsmen work 24 hours on and 24 hours off. Their salary is similar to the same kind of work performed in the United States.

Practically all necessary maintenance work on vehicles, pumps, and other items of equipment has been carried out by Salvage Corps' personnel in the Corps' own workshops. During 1949 there were 132 minor and 24 major repairs carried out on vehicles. Repair work is growing more extensive due to considerable wear as the vehicles become older. The Corps presently is working on a plan for replacement of all its vehicles during the next four years.

The visitor to the Salvage Corps is amazed at the excellent use of photography that is made. Developing facilities are at the Watling Street headquarters. Such extensive use of still photography is used to direct the attention of insurers to special features found when carrying out salvage work. This is especially valuable in cases where circumstances indicate the probability or possibility of subsequent fire outbreaks.

Work of the Salvage Corps at the fire scene closely parallels that of its brother fire insurance patrols in the United States.

As soon as the Salvage Corps officer-in-charge arrives at a fire he must make a quick survey of the fire and then send a message to his station describing the fire from a Salvage Corps point of view, and calling for more salvage rigs if he needs them. A multi-alarm fire may offer little opportunity for salvage work but a pre-determined assignment (box alarm) fire may call for little fire-fighting service but much work for the salvage crews. Actuation of sprinklers in a factory is an example.

When a building is nearly totally involved, it is obvious that little or no salvage work can be carried out. Accordingly, Salvage Corps officers are cautioned against ordered-out additional appliances.

If upper floors are burning, the salvage crew, similar to United States procedure, takes a position on the floor immediately below and covers contents with waterproof sheets. London Salvage Corps sheets vary in size from 18 by 15 feet—the largest now—to 12 by 10 feet. They are now experimenting with larger sheets, but with the larger sheet, they acknowledge, it is more difficult for salvagemen to place it.

After spreading covers on the floor immediately below the fire floor, the Corps then works its way down to the next floor below and so on until it gets to the first floor. Salvage Corps procedure calls for a minimum of one officer, a driver, and six workingmen with each second turnout appliance.

After covers have been placed, the Corps then begins the job of clearing out the water, using brooms and sqeegees. Corpsmen route the water out of the building via staircases or similar means.

When water accumulates in the basement, the London Fire Brigade or the Salvage Corps uses portable pumps in clearing the water out. The Salvage Corps has two-inch pumps, with a suction lift of 25 feet and capable of pumping 100 gallons a minute.

To convey water from a building, the Corps often uses telescoping pipes which they have had for two years. These pipes extend to varying lengths. They make it unnecessary to nail covers into walls as the pipes form standards on which salvage covers are hooked. Covers are used as channels to convey water from the fire building.

After the fire is extinguished the Corps sometimes details a man at the scene to prevent looting or to check on placement of covers. There have been occasions where a man has been detailed to a fire scene for as long as a month. The Corpsmen secure the premises by boarding it up or using corrugated iron.

It is seldom that Salvage Corpsmen are called on to assist firemen of the London Fire Brigade in handling hose lines at a fire. The Corps' turnout appliances contain a long list of tools and apparatus for use in carrying out their salvage operations.

World-wide Reputation

That the Salvage Corps has a world-wide reputation for its efficiency is attested by its guest book which lists names of visiting fire officers from departments and salvage brigades all over the world.

During the week this FIRE ENGINEERING correspondent was in London he met fire officers from Arabia and India at Salvage Corps headquarters. During 1949 visits were paid by fire officers from the United States, Stockholm, the Bombay Salvage Corps, Australia, Holland, Norway, and Denmark.

March Fire Losses

Fires destroyed an estimated $71,507,000 in American property during March, it was announced by Lewis A. Vincent, general manager of the National Board of Fire Underwriters.

This is an increase of 3.4 per cent over losses of $69,136,000 recorded for February and is 1.3 per cent less than losses of $72,468,000 for March of last year.

For the twelve months ending March 31, 1951, fire destruction amounted to an estimated $708.158,000. This represents an increase of $38,559,000 or 5.8 per cent over the fire loss total for the twelve months ending March 31, 1950.

Losses for the first three months of this year totalled $209,329,000 which was an increase of 10.4 per cent over the same period in 1950 when losses were $189,631,000.

The estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

Grand Forks Has Record Low Fire Loss for 1950

There's a bit of chest thumping, deservedly so, out in Grand Forks, N. D., Fire Department, where Fire Chief J. P. Newark and his men have chalked up the lowest fire loss figure in many years.

In 1950, the City of Grand Forks, with a population of 27,000, sustained a loss of only $13,863.89. According to Chief Newark, much of the credit for this record is attributed to the department's Fire Prevention Bureau which has been in operation in recent years. The function of the bureau is to inspect buildings for fire hazards and to see that violations are rectified. Another factor that has helped, according to the Chief, is the cooperation and support given the fire fighters by the public and local business establishments in clean-up campaigns.

Taxi Driver Radios Alarm

In New Orleans the driver of a radio taxicab reported a fire at Race and Annunciation streets, at 3:00 a.m., February 16, using his short wave radio. He radioed his Yellow Cab Co. dispatcher, who in turn notified fire headquarters.

The fire damaged three sheds to the extent of $3,000.

Fire Service Ladders and Their Use—Part XIII

Preventive Maintenance of Fire Service Ladders

By ROI B. WOOLLEY

The material for this Chapter has been gathered from many sources. The author particularly desires to thank the manufacturers of fire service ladders who have generously made available their instruction, inspection and maintenance data. Special appreciation is extended Hubert A. Walker, Manager, Motor Fire Apparatus Sales Division, American LaFrance-Foamite Corp., Elmira, N. Y. and the Aluminum Company of America for much helpful information. Acknowledgment is also made of source data of the American Standards Association, New York City; National Safety Council, Chicago, Ill.; the International Association of Fire Chiefs, New York City and other fire service organizations and individual fire departments, particularly those of New York and Chicago.

This Chapter should be reviewed in the light of earlier installments covering the design and construction of ladders (Part III); wood and metal ladder limitations (Part IV); overloading (Part V); testing (Parts VI, VII, VIII and IX), and the use and abuse of aerial ladders (Part X).

A common cause of ladder damage: ladder at extreme right is falling, following a "back draft" at fire. Careful inspection of such a ladder is highly essential before it is again used.

As has been emphasized in this series of chapters on fire service ladders, these most important tools of the fireman's calling must be ready at any moment to aid in the saving of human life, and property. Nothing less than the best of materials and the most painstaking craftsmanship should be permitted to enter into their construction. Nothing short of unremitting care and inspection should be exercised in their maintenance to keep them fit for the extreme demands that may be made upon them.

It is a tribute to the manufacturers of the nation's fire service ladders that there are so few recorded instances of failure of their products even under stress of most strenuous usage. In their interest, also, it must be admitted that investigation indicates that a considerable percentage of known ladder failures in operation, or upon test, is traceable to failure in preventive maintenance. In a word, even the best of ladders will deteriorate and can fail at critical moments if they are not properly cared for.

Inasmuch as a fire fighter must sooner or later entrust his life, and possibly that of others, to the ladder upon which he is operating, it would seem hardly necessary at this point to remind readers of these chapters of the importance of maintaining these essentials in top condition. Unfortunately, such is not always the case. There are many fire departments where some ladders have never been tested and others where such equipment is given only the most perfunctory inspection. These departments are not found only in the field of volunteers. There are large full-paid departments that have been equally guilty. One of the pet excuses of the latter for the failure being "we're too busy to fuss with inspecting ladders after every fire," or "That's the job of the shops—when they give the truck an overhauling let 'em check on the ladders." Some departments just don't want to be bothered.

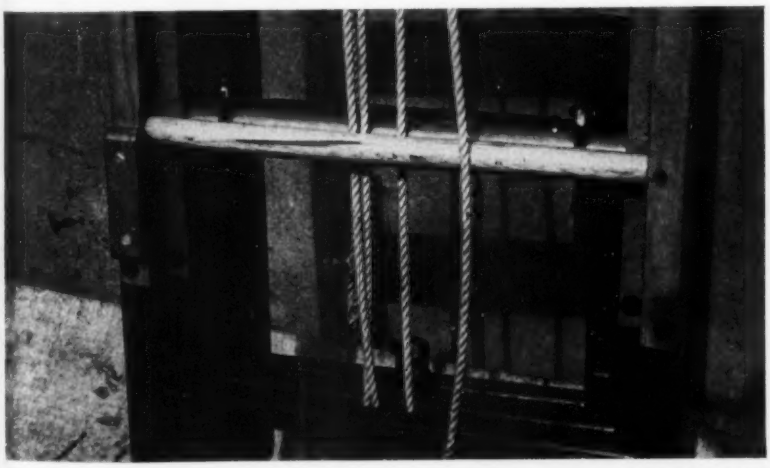


Photo by Hubert Walker

Maintenance should begin with careful inspection of ladder when delivered. The center front rung of this ladder has a knot in it and large sap streak, indicating that the ladder may fail before its time.

Present Conditions Make Ladder Preventive Maintenance Imperative

Under present economic and other conditions, with increasing material costs and scarcities of selected wood, ladder costs have mounted. Under such conditions there is a natural tendency for some civic officials, as well as fire officers, to consider costs too high for replacement and therefore to try to make the old, outworn ladder do.

It is true that careful maintenance may stretch out the life span of many fire service ladders, but even the best maintenance cannot prevent accidental injury to a ladder. Under these conditions it is worse than folly not to discard the defective, or doubtful, product and replace it with the new.

There is another phase of this situation which is causing concern. Faced with higher costs, difficulties in getting quality materials, and the slowing up of

deliveries as well as the disinclination of some city officials to appropriate sufficient funds for the type of quality fire service ladders that have been the mainstay of the fire forces for years, the manufacturer must either face a diminishing market for his product or cut costs so as to maintain his selling price. This means substitutions of cheaper materials and a lowering of workmanship in order to cheapen the product. The fire service is the loser. Lower grades of fir, or of metal, mean shorter life for the ladder—with increased maintenance problems, and greater hazard to users.

It is to the credit of fire service ladder manufacturers that for the most part they have thus far resisted the temptation to reduce the quality of their products.

Inspect—Inspect and Inspect

Prime requisite in maintaining fire service ladders is frequent and thorough inspection, regardless of the type of ladder used (some fire officers have the mistaken belief that because a ladder may be built of metal it is therefore more impervious to injury and deterioration. This is of course not true. Many departments make it a practice to inspect every ladder that is used at a fire or other incident, upon its return to quarters. In addition, they have a regular time for making ladder inspections. In some cases this is done following company or periodic departmental drills. In others, it is a regular duty performed periodically, the number of inspections within a period depending upon the number of men in the company, and how they work such inspection details should not fall upon a limited few of any company).

Some departments insist that ladders that have been employed at a fire, drill or other incident, must be carefully gone over before replacing them on the apparatus and returning to quarters. In some cases, ladder inspection is combined with cleaning and drying the ladder before returning to quarters instead of after. In others, some sort of inspection is made both before returning and afterward. Unless a fire company has radio, this method of inspection may of course lengthen the out-of-service period of the unit, but whether the inspection is made after returning to quarters, or at the time of "picking up," that time may be well spent.

It is hardly necessary to say that accurate records of every ladder in service should be kept, from the time the ladder enters the department. Major inspections and tests, and all repairs and/or replacements to the ladder, in particular, should be recorded.

Not every fire department follows the same procedure in maintaining its working ladders. One suggestion, however, applies to all departments and to all makes of such fire fighting and rescue essentials. That is for the department to secure from the manufacturer of its service ladders complete information and instructions for their proper maintenance, together with all possible data on their proper operation and use. This applies with particular force in the case of aerial ladders.

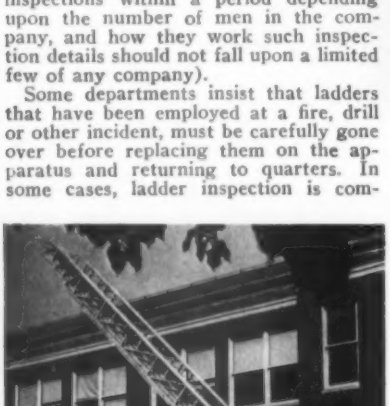


Photo by Hubert Walker

Good maintenance requires thorough knowledge of ladders and ladder mechanism. Here firemen at the Pennsylvania Fire School are taught the operating mechanism of an aerial ladder with a view to maintaining it in perfect operating condition.

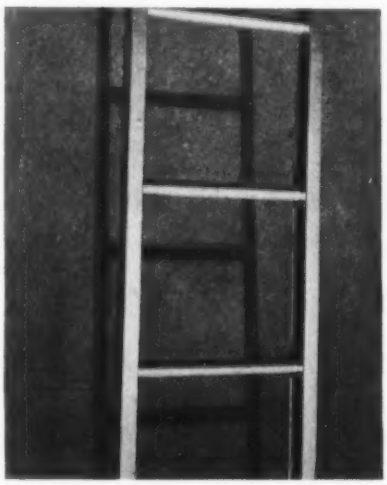


Photo by Hubert Walker

Inspect beams and rungs of all ladders. Care in handling will prevent injury to rails or beams of all type ladders. Note the ribbed rungs of this aluminum alloy single wall or roof ladder. This rung construction insures good grip and keeps rung from turning.

Maintenance of Ground Ladders—General

Preventive maintenance actually begins with the time of arrival of a ladder and its placement on the apparatus. With proper care, portable ladders should live as long as the ladder truck itself. Frequently, however, it is necessary to replace ladders that inspection has proved defective and unsafe.

Much depends upon how ladders are carried on apparatus. The modern procedure is to carry all portable ladders in the ladder bed or body of the truck, on rollers and guides. Although both straight and extension ladders are carried on the sides of some ladder trucks, both service and aerial, these are generally old style apparatus. The majority of the limited number of service trucks being delivered today have fully or partially enclosed bodies. Many accidents have resulted from carrying ladders on the sides of ladder trucks. If this practice is followed, it is essential to see that brackets and braces are firm and tight; that rungs fit properly into brackets (without injury to rungs), and that locking pins are strong, and in place.

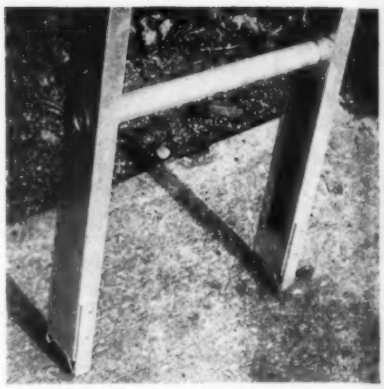


Photo by Hubert Walker

Steel heel plate on aluminum ladder. This type heel construction reportedly saves wear and tear on butts. Heels of all ladders should be carefully inspected for chips, splits and breaks to insure ladder will rest firmly and evenly.

Where ladders are enclosed, fully or partially, the body or other enclosure, such as trough, should be checked for interior depreciation such as rust and corrosion. Moisture, if allowed to remain in such enclosures, may adversely affect the ladder and fittings.

Supports and rollers, and guides should be ample to support ladder weight without strain and its removal and replacement without forcing or extreme pressure. A suitable buffer should be located at the fore end of the truck to receive the heel or other end of ladders. Manufacturers usually attend to these details before apparatus is delivered but good maintenance practice suggests these details be checked.

Care in Handling Ladders Facilitates Maintenance

Care should be exercised in placing all ladders on apparatus. They have their locations on the truck; efforts to force ladders into wrong locations may cause injury. Careless storage, as in "nesting" ground ladders, may result in their injury. Ladders have been damaged as a result of attempts to re-load them (usually in the dark) wrong-end-to in the truck by applying force to them when they stick. There is no excuse for this situation with the modern ladder truck, in which the ladder bed is lighted and where locations of all ladders are indicated on the braces, guides or body of the apparatus.

All slides, rollers and moving parts of the frame holding ladders on the truck should be lubricated, preferably with graphite or lubricant that will not dirty or damage the ladder.

More injury to ladders apparently oc-

Brackets and fastenings for side ladders should be carefully checked. Although the modern ladder truck carries no side ladders, many trucks still in use do so. A loose locking pin or bracket may cause a serious accident where firemen use side ladders as holds.

curs in their removal from apparatus rather than their replacement on it. This may be because under stress of action at a fire proper care is not exercised.

It is the custom on most ladder trucks to carry some short, straight ladders in longer ladders, both straight and extension. Some trucks carry several ladders in a single "nest." Thus, in order to get at any of the longer ladders it is necessary to remove the shorter ones. Sometimes this is done carelessly, the shorter ladders being thrown to the ground, or against sharp-edged curbing or other objects, which may cause serious damage. Men should be trained to use care in removing ladders, placing those not needed immediately in a safe position where they cannot be injured and where they cannot cause injury to personnel. The same sort of care should be exercised in setting down and carrying ladders that is advocated in handling threaded hose butts.

Many times it is necessary to use a ladder in some emergency in such a way as to risk injury to it. For example, as a bridge or a battering ram, or an improvised stairway in a burned building. Where ladders are so used they should later receive special inspection.

One or two additional suggestions in the handling and care of ladders may make for easier maintenance.

Never "walk" a ladder, or pitch it up by opposite corners. Both practices cause unnecessary strain and tend to loosen rungs.

It is neither good practice to slide a ladder along a cornice to reach a new position nor to "roll" a ladder beam-over-beam with the same objective.

Men should be taught the proper procedure for carrying sharp edged tools such as axe, roof cutter, so as not to injure ladders (or themselves).

Then, of course, there is the damage that can be done by improper placement, and overloading, as described in previous installments of this series.

Many departments make it a practice to always wipe off wet ladders after use. Moisture raises the grain of the wood where varnish has been knocked off and increases rot.

Many extension ladders have been injured by placing tormentor poles an unequal angle and disance from the ladder. This throws more strain on one pole than the other and may break the pole, or cause the ladder to tip.

The Seasons and Ladders

The seasons and climate have their effect on ladders. In the Spring, after a fire station has been kept warm all winter and practically no moisture has been in the apparatus room, the ladders will have expelled all the moisture which they have had during the Fall. Bolts have a tendency to become loose. They should be tightened, but with care so as not to sink the heads and nuts into the wood. Tightening them too much may cause serious damage because when wet weather comes, these nuts and heads may sink in still deeper because of the swelling of the wood. Many departments turn up these bolts only handtight. One manufacturer advocates leaving the bolts alone rather than to turn them up by wrench, on the theory that when the wood absorbs moisture, which it will do, the bolts will be again tight.

Good maintenance decrees that where ladders are kept, the fire station should have a proper amount of humidity in the winter, during the heating season, even if it is necessary to keep a pan or tub of water under the apparatus or near it. In the Summer, ladders receive sufficient washing, this company believes, to keep the proper amount of moisture in the wood.

Keep ladders away from steam pipes, stoves and the hot sun at the station, or elsewhere. If the ladders are not in service often; allow outside air to blow in the windows on the ladders as often as possible. Fresh air is good for fire ladders as it is for man. It helps prevent dry rot and fungus growth in wood.

Ladders should be stored in such a manner as to provide ease of access or inspection, and to prevent danger of accident when withdrawing them for use.

Wood ladders, when not in use, should be stored at a location where they are not exposed to the elements, but where there is good ventilation. Ladders stored in horizontal position should be supported at a sufficient number of points to avoid sagging and permanent set.

Aerial Ladder Maintenance—Wood

Thorough visual inspection of the ladder and mechanism will indicate if the ladder needs repairs or is safe for testing. Some of the more important points for an inspection check are as follows:

1. Check side rails for shrink cracks and evidence of weathering.
2. Check all truss rods, including all bolts and lag screws holding truss rod posts and brackets to make sure they are snug and not loose.
3. Check for loose rungs, splinters and cracks.
4. Check trussing for proper adjustment. Too tight truss rods may cause a bow in the ladder. Too loose rods weaken a ladder.
5. Details such as bed plates, ladder rollers, ladder locks, turntable locks, pawls and pulleys should be inspected frequently.
6. Cables and ropes cannot be inspected too carefully. Any defective cable or rope should be replaced immediately. To inspect cable, one department has a man don a canvas glove and go along the entire cable with the gloved hand, looking for defects in the cable as well as broken strands of wire.
7. Follow the manufacturer's instructions concerning inspection and maintenance of all mechanical details, lubrication, use of hydraulic fluids, etc.

A number of departments apply what is called the "bradawl" test. This consists in taking any sharply pointed instrument, such as an ice pick, and trying to insert the instrument into the beams to test for dry rot, splits or sliver cracks. Resistance to the pressure of the instrument will indicate the degree of "liveness" of the wood.

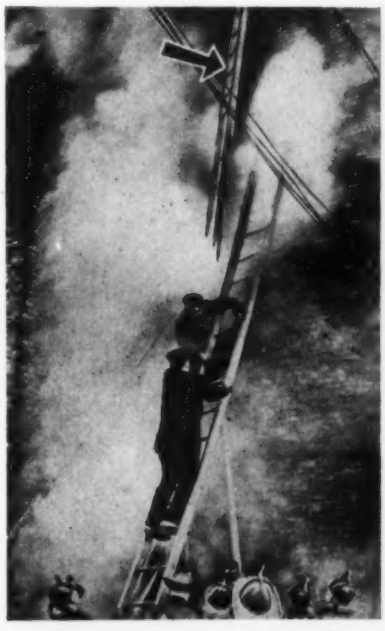
Maintenance—Varnishing and Painting

Some departments make it a practice to paint their beam ladders. This is not considered as safe as varnishing them. All wood fire service ladders, beam or truss type, should be kept clean and varnished.

In order to finish a ladder properly in natural wood and keep it so that it is presentable, and protected from the elements, it is necessary to constantly revarnish it.

There are a number of procedures for doing this. One large department follows these instructions (trussed ladders): Remove varnish. Use a strong solution of hot water and Gold Dust for cleaning the ladder after removing the varnish. Rinse this off with clear water. Use a solution of one-half pound of oxalic acid crystals to one-half gallon of water for bleaching. After the ladder has dried, clean with vinegar, hot water, or a solution of saffagrand. Apply one coat of shellac and one or two coats of clear finishing varnish.

(*Continued on page 473*)



Arrow indicates ladder which broke during fire fighting operations, seriously injuring a fireman. The purpose of ladder inspections is to prevent accidents like this.

THREE FACTORS GOVERN SUCCESS IN CONTROLLING WARTIME FIRES

Proper Command, Adequate Equipment and Sufficient Water Supply are Vital

By Chief G. Eastham
Worcester City and County Fire Brigade, Worcester, England

THE previous article by the German contributor envisaged fire storm conditions in the event of another war. There is no doubt that the possibility of fire storm conditions will increase as time goes on, since the attacking force has available to it atomic power which could create such conditions.

The fire storm created in Germany was by "saturation" bombing and mainly by the use of the normal incendiary bomb, as it was known in the last war. Most military authorities agree that the expense and cost of production for an atomic bomb would make any large scale attack still rely on the old missiles, H.E. and incendiary bomb, as used in the second world war.

The Korean conflict has seen an increase in the use of incendiary agents other than atomic energy, and there is little doubt that one has still to consider the old means of attack. Officers who have seen the cities of Germany and spoken with members of the fire brigades in Germany, have been unanimous in the opinion that the fire defense in Great Britain showed an improved overall picture under attack than that disclosed by investigation in Germany.

The contributor in the March issue gave a fair treatise on the problems that face fire forces under fire storm conditions, but the major issue and the main difference, as disclosed between German and British methods, is that the British Fire Fighters took more account of the need for unlimited static water supplies if any reasonable defense was to be made. In the great cities of the Rhineland, Berlin and Hamburg, there was nothing like the same expenditure in material and thought on the production of water supplies near to the targets, though they often had natural unlimited supplies reasonably near. It became evident, before any raiding in Great Britain, that static water would be required. Under the early raiding of 1941 it became obvious that the figure would have to be increased tremendously, and, under the National Fire Service, the production of static water sites, dams and pipe lines went forward at an increased tempo.

The other main criticism that could be made of the German war machine with regard to its fire fighting force, was the fact that the control was divided between the police hierarchy on the one hand and the Luftwaffe hierarchy on the other. There is little doubt that the Germans had the right idea in mobile battalions to be moved wherever they were required, for the purpose of reinforcing the fire fighting resources of the community. Where they failed was in the dual command of these resources.

Flames shoot out of buildings on Charterhouse Street in London during the great raid of May 10, 1941.

Any organization which has to provide a defense system against fire in time of war must have three main planning requirements—

1. The administration, supply and command basis of the fire force.
2. The material and appliances for that force.
3. The static and supplementary water supplies, so that the force can become a fighting agency. Just as guns are useless without ammunition, fire pumps are useless without water.

As to (1) above. The British Fire Fighting Services operated at their most testing time under too many commands. The responsibility, until August 1941, was vested in District Councils—of these there were about 1400—and the result was a wide difference between the best that could be created and the smaller commands. The National Fire Service divided the country into about 40 fire fighting commands, with 12 regions to control the differing number of fire forces according to the area in which they were situated. There is no doubt that under war conditions this command basis allowed for speedier assistance from one area to another, but it was never given the test that the smaller commands were given in the early raids.

The German idea of mobile battalions and the British equivalent, the Overseas Columns, as were prepared for the invasion, were much better assisting agencies since they could be made self contained for the purpose of moving quickly from "A" to "B" and could provision themselves, thus not throwing the added responsibility on the administration of the area.

Where the German plan failed was in separate control of the mobile battalions and, even if it were maintained that this was difficult in Germany, the fact that the Fire Fighting troops concerned were responsible to a different headquarters in itself proved to be a brake on the system.

I believe that any system of administration and command, whether it be of the standard of 1400 as in Britain at the outbreak of the last war, or the nationalized service which resulted, could be made to work. The bigger command was better in time of war. This problem is, no doubt, a real one in America.

As to (2) above and the appliances required. I suggest that the maximum amount of carried water, subject to the appliances being mobile with, if possible, 4 wheel drive and a power take-off allowing the full pumping power given by the torque of the engine, would meet the requirements of the initial striking force in the event of war.

Most fire fighters in Britain have not had the advantage of testing high pressure fog fire fighting, but it would appear to me, from experience with the American forces, that the appliances should have high pressure fog fire fighting available to them, so that the water can be put to the most effective use and with the greatest economy. Such a unit has distinct advantages in chemical warfare, e.g. decontamination, and, being self contained, certain of the problems of radiation.

You, in America, have produced three

stage pumps, allowing a third stage to be used for high pressure fog fire fighting, and such a pump would appear to meet much of the requirements, since it does not require an auxiliary power takeoff to produce the high pressures. It would appear to me that a three stage pump allowing the impellers to be used in series or in parallel, is required at the present time, and allows for some flexibility in the use of the pumping appliance. Further equipment will be required for the water schemes, and in particular for the pumping from bore hole or from tidal waterways. Large diameter piping would be required for pumping from inexhaustible water supplies. Static water basins and quick action lightweight piping for repair and for further pumping. An increase in other gear would be in proportion to the work required in any particular area. I believe that most fire fighting forces could operate with their present material, subject to it being expanded for wartime, but that more suitable equipment might be designed than at present seems to be available.

As to (3) above. Here we are not on such safe ground. Unless large scale plans are made before the event and much of the material work done before an attack could take place, no fire fighting force will be able to hold its position.

The British plan in the last war was to pump from the nearest inexhaustible supply through increased tankage to smaller tanks situated near the actual risk. The principle was accepted that the immediate pump responding would have sufficient hose to pump from the tank nearest the risk, and that, as farther pumps were called upon, relays would be required and for the purpose of these relays, prelaid steel or lightweight piping should be laid. Such relays would be from tank to tank wherever possible or from inexhaustible supply to tank. Hose would only be used where damage had occurred or from the last tank to the fire risk itself; for the purpose of inexhaustible supplies, fixed pumps would be required where these were static water, and, if on tideways, borehole pumps with maximum output so situated that they would take account of the rise and fall of the tide. Pictures show what was used in Britain in the last war. At the outset great difficulty was experienced due to the fall of the tide and the problem was not solved until pumps were fixed to take account of the rise and fall.

Figures could be given of what was required in the last war, but, since it necessitates a personal survey of each risk and a survey of the area from which pumping has to take place, I don't propose to give any figures in this article.

What I would wish to emphasize, having read with interest the article by the German contributor, is the need and requirements for the laying down, after careful planning, of the means of providing unlimited water supplies from an inexhaustible source by the Fire Service in any area where intelligence shows that a likely attack is to take place. It would obviously be impossible to lay down this requirement in every area of any country open to attack, and priorities would have to be given since great capital expenditure is involved.

Your leading article in the March edition touched on the problem at one fire. Expand this a thousandfold, nay ten thousandfold, in any one community and you will see it requires firm action. You may get by on (1) or (2) of the main planning requirements, but on the third count "Water Supplies," you, and we, have much to do.

Flourtown Firemen Honored

The Flourtown Fire Company of Flourtown, Montgomery County, Pa., was honored as the outstanding volunteer fire fighting unit at the 42nd Annual Banquet of the Montgomery County Firemen's Association on April 28, held in Norristown City Hall.

Before 560 members, Fire Chief Charles H. House received an award plaque in behalf of the company and the 17 members who were specifically tendered the honors. The plaque was presented to Chief House by J. W. Cadwell, Pennsylvania Railroad Fire Marshal, a member of the three-man committee which selected the award winner. The award itself was donated by Frank A. Rowe, retired Philadelphia Fire Bureau Battalion Chief, who established it for the most deserving volunteer firemen of the County.

The award was made to the Flourtown Fire Company, of which Walter C. Smith, Jr., is president, for heroic efforts displayed at the tragic Belle Vista Sanitarium fire of March 29, 1950. The Company was first on the scene of the fire, which resulted in the death of 10 patients. A patient of the institution later admitted setting the blaze.

Naming the Company for the award, the committee cited the members for heroism in entering the burning building and freeing patients who were either shackled to beds, or confined to rooms with barred windows. "Their work," commented former Chief Rowe, "resulted in preventing loss of more lives. They risked their own lives by rushing into the building regardless of danger, and either freeing patients or leading them to safety."

Serving with Caldwell on the selection committee which received nominations for the award from among the fire chiefs of the county, were Battalion Chiefs T. Meskill and Henry M. Kincy, both of the Philadelphia Bureau of Fire.

The plaque will be permanently located in the newly constructed firehouse, due to be ready for occupancy before fall.

Volunteers Win Praise in Press

The press does not always deal kindly with the volunteer firemen. In the case of the members of the River Grove, Ill., Fire Department, and Chief Henry Schmidt however, the local township newspaper, "The Herald" spreads praise profusely, in a story by Pat Ennis, who is both photographer, columnist and fire fan.

The occasion for the flowery tribute was the work of the River Grove vamps, under direction of Chief Schmidt, and their neighboring volunteer Brothers, Elmwood Park and Franklin Park, in winning a four-hour fight against what bid fair to prove a disaster when a roaring fire struck the Welco Petroleum Company in River Road, River Grove.

Pat Ennis's glowing tribute to the fast work of the River Grove boys, the quick sizeup and calling for help by Chief Schmidt, and the prompt and stalwart response by the Elmwood and Franklin Parks vamps in tackling the blaze which involved 246,000 gallons of gasoline and fuel oil and which at times sent flames 30 feet into the air and threatened a wide area, is well-deserved, according to many others who witnessed the battle.

Fire fighters strive desperately to control fires involving buildings along Queen Victoria Street in London during the Nazi blitz in 1941.

NAVY FIRE-RESCUE SUIT* INSULATED AGAINST 2100° F

Product of Three Years of Effort, Suit May Find Place in Fire Service

THE daily routine of training hundreds of Navy men in the use of fog and foam is rated highly at the Damage Control Training Center on the outskirts of the Philadelphia Naval Base, and is an important contribution to saving countless ships and lives imperiled by fire at sea. But perhaps the hottest development there is a suit, a man-from-Mars outfit, that allows its wearer to walk through 2100° of burning gasoline and emerge sweating but unharmed.

During the war, the Navy found that fires resulting from bomb hits and Kamikaze attacks caused greater damage than that resulting from the actual hits themselves. Not only was a large group of well-trained fire fighters needed, but also on the required list of equipment was protective clothing that would enable the men to enter compartments completely filled with flames or live steam, so that valves or hatches vital to the ship's survival might be closed.

To meet this need the Navy's Experimental Test Laboratory developed a five-layered suit and turned it over to the experts at the Fire Fighting School for testing, the kind that involved putting it on and making the first steps into a hundred-gallon gasoline spill.

Lt. Comdr. Albert B. Mullen, officer in charge of the school and a veteran fire fighter from Falmouth, Massachusetts, did just this about a year ago. The suit he wore had an inner lining of sweat absorbing flannel backed up with a layer of special fiber glass. Since one of the major shortcomings of earlier asbestos rescue suits had been the transfer of steam if the suit became wet, a fiber glass cloth was impregnated with neoprene and used as the next layer. A second round of the fiber glass, an outer covering of asbestos cloth and the three-piece suit was ready.

Standard Navy oxygen breathing apparatus is strapped to the fire fighter's chest. He then steps into the asbestos overalls which have shoes attached, and slips on a parka which reaches almost to his knees. After a final check of the breathing device, the large helmet is put on and into the inferno the man goes, capable of remaining in the hottest gasoline fire for at least half an hour, without damage to the suit or its wearer.

Official U. S. Navy Photo

Wearer of Navy's newest asbestos fabricated protective clothing prepares to enter steam-filled room at test held at the Philadelphia Naval Base.

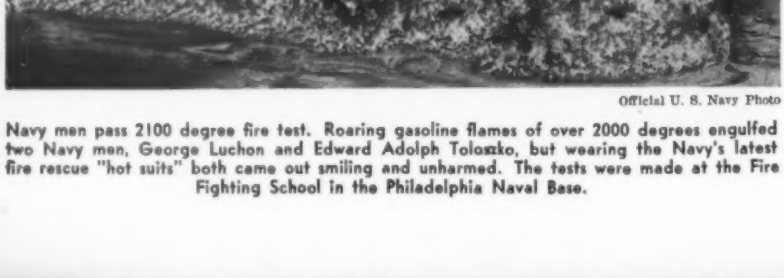
A special quartz glass in the helmet allows adequate forward vision, although when surrounded by flames it becomes necessary to bend low to get an identifying silhouette of the object being rescued. Weighing only thirty-five pounds, the suit allows complete freedom of movement. Running, jumping, climbing is possible at all times. Using a built-in harness, the man can be lowered over the side or down into the hold.

After Lt. Comdr. Mullen's initial test of the suit, it went back to the laboratory for more improvements, and a few months ago was taken from an experimental status and used in routine training of Navy men without previous fire fighting experience.

The first graduates were crewmen from the aircraft carrier Saipan, and who have now been assigned to the ship's crash crew. Mullen gave them a three-day briefing in the suit's construction and use before allowing them to pass the test.

Just before the exhibition began, Mullen said, "We're sure of the suit, but have to be certain of the wearer's ability to think and work under the worst possible conditions. I have tried in every way to discourage these boys, make them back out at the last minute, but they want to go through with it."

The men first went into a simulated boiler room, filled with roaring gas and oil flames, and rescued a dummy. Without pausing they shuffled over to a paved area where one hundred gallons of gasoline was spilled and torched off. Back and forth through the raging flames they walked, at times hidden from the spectators. After half an hour the men calmly removed their "hot togs" and discussed with the bystanders some of their experiences.



Official U. S. Navy Photo

Navy men pass 2100 degree fire test. Roaring gasoline flames of over 2000 degrees engulfed two Navy men, George Luchon and Edward Adolph Tolonko, but wearing the Navy's latest fire rescue "hot suits" both came out smiling and unharmed. The tests were made at the Fire Fighting School in the Philadelphia Naval Base.

*Based on information supplied by the Office of Public Information, Department of Defense, Washington, D. C.

Radio Cabs Spot Two Different Fires Within Minutes

At 1:39 A.M. one Friday last April, the Cincinnati Fire Tower (fire alarm headquarters) received a call from the dispatcher of a radio taxicab company that one of their radio cabs had spotted a fire in a scrap yard at Findlay and Central Avenues.

Fire Tower Operator, Pat Holz, struck Box 1341 which took three engine and two ladder companies and a salvage corps unit all under command of District Marshal Richard Spelman, to the scene.

The fire was in an old 1938 Olds sedan, being dismantled in the yard. Engine 13, first due, operated on the fire, which fully involved the old wreck. After knocking down the blaze, Lieut. Chas. Otten opened the car door to get at the interior and was startled to discover the body of a man within, completely burned.

The victim was later identified, but no apparent reason was advanced for his being found in the burned-out car, or for the fire itself. It was surmised that he might have crawled into the vehicle and fallen asleep while smoking. Firemen held the fire to the single auto.

That incident in itself was out of the ordinary, but the story has a sequel. At 1:41 A.M., the same day, the same cab company dispatcher called the Fire Tower and said another of his cabs had located another fire. This was not an abandoned auto, but was in a contractor's shed at 7th and North.

Box 1218 was struck, sending four engine and two ladder companies and a salvage corps unit under command of District Marshal Wm. Telcher, to this fire. This blaze was soon extinguished.

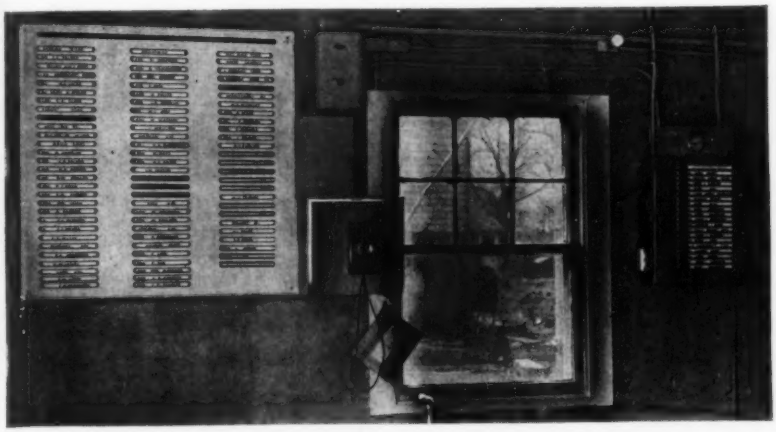
HOW MONTGOMERY VILLAGE HANDLES COMMUNICATIONS

Volunteers Designed and Built Own System Having Many Unique Features

A Staff Report*

ON the bank of the Fox River, just south of Aurora, Ill., is the little town of Montgomery, population just over 600. This is the interesting story of one phase in the development of its volunteer fire department: communications.

Like other organizations that have learned about sirens the hard way, the volunteers found that if the siren is up too high much of its value in decibels is lost locally though it may be heard several miles away.



Montgomery fire station interior showing communications features. Locator-annunciator alarm device at right; telephone and directory center, and list of out-of-town subscribers that carry insurance riders with the department at left.

Like so many other communities, big and little, civic improvements in Montgomery were of slow growth. As time passed, the town installed street lights; then water and sewerage. But, again like so many other towns, when it came to fire protection there never seemed to be quite enough funds available for this essential.

Although financial backing was conspicuous by its absence, a fire department was formed. Its members got together with the village fathers to discuss what was needed, and how to get it. A lot of things were needed, including a fire station, apparatus and alarm system.

How the funds for the first two essentials were provided and the three-door cement block station erected, and the first piece of apparatus was secured, is another story. This account deals with the vital problem of communications, of handling the alarms for fires and emergencies, of alerting the department personnel and related factors. We give it prominence because we believe that in this detail of how a small town fire department handles communications will be found ideas for other volunteer departments.

To begin with, the Montgomery volunteers procured a five-horsepower siren and mounted this thirty feet above ground on the steel framework of the community's water tower, located next to the firehouse.

The next problem was: who would sound the alarm—and how would it be done? Obviously it was hardly to be expected that a person whose house was on fire would take the time, or remember to run to the fire station and hold his or her finger on the siren button until everybody was alerted.

It took a bit of doing, but the volunteers managed to procure and install a modest fire alarm system. Nineteen street fire alarm boxes were set up, giving better than average coverage; the necessary code machinery to operate them was secured from cities in the area. Of course this old equipment had to be revamped, but as somebody has well said, "you can't beat a volunteer when it comes to ingeniousness."

The problem of having 24-hour watch service, that is somebody to receive telephone calls and alarms from outside as well as inside the community, was solved by enlisting the aid of the railroad that serves the town. A phone was located at the railroad tower where an operator is always on duty. In addition, a code instrument was installed at this tower so that the operator can transmit to the fire station any signal indicating the location of a fire or emergency that may be telephoned or otherwise transmitted to him.

But the heart of the communications setup, the volunteers believe, is the automatic annunciator located at fire headquarters.

It should be added that if the fire or other call is from out of town (the department serves a wide area), the operator at the tower can request by code that the first fireman who gets to the fire station shall call him. There is an extension phone at the station to facilitate communications between the latter and the tower.

To continue with the annunciator: When a code is received over the system, it is registered in large print on this service, showing the location of the fire or emergency. As this is done, four things happen. (1) The siren, previously described, lets loose for one minute; (2) the lights in the fire station are turned on and remain so for four minutes; (3) the fire station door opens and also remains in that position for four minutes, and (4) blinker warning lights located at main street intersections flash a four-minute warning.

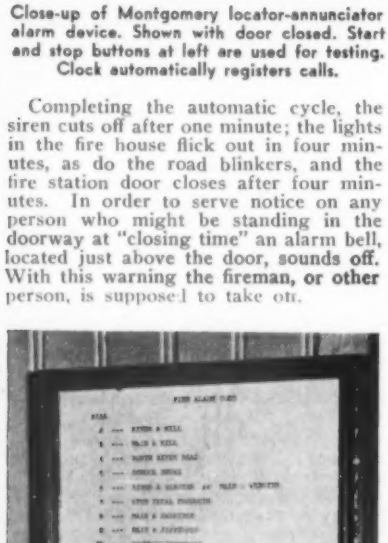
The locator-annunciator displays the location of the alarm for a full nine minutes. As C. M. Gaylord, secretary-treasurer of the department, says: "This is for the fireman who can't arrive in time to catch the truck but wants to know where the fire is."

Montgomery, Ill., fire station, water tower and siren.

*The information on which this report was based was furnished by C. M. Gaylord, Secretary-Treasurer, Montgomery, Ill., Fire Department.

Close-up of Montgomery locator-annunciator alarm device. Shown with door closed. Start and stop buttons at left are used for testing. Clock automatically registers calls.

Completing the automatic cycle, the siren cuts off after one minute; the lights in the fire house flick out in four minutes, as do the road blinkers, and the fire station door closes after four minutes. In order to serve notice on any person who might be standing in the doorway at "closing time" an alarm bell, located just above the door, sounds off. With this warning the fireman, or other person, is supposed to take off.



Code sending device installed at railroad tower. Montgomery's alarm system is activated by railroad towermen on duty 24 hours a day.

But this isn't quite all. At the end of nine minutes, the locator-annunciator automatically and completely resets itself to receive the next call.

All this is recorded on a Telechron clock which is automatically stopped with receipt of the first signal. Upon the return of the firemen to the firehouse the time is logged for the record, and the clock reset.

The question may be asked, what happens when the call is not for a fire and only the First Aid Team is wanted? The answer is that the big siren is coded. For fire calls, the siren has a "warbling" up-and-down note. But for the first-aiders, it sounds a one-minute straight blast.

Although it is considered hardly likely, the volunteers have anticipated the possibility of having more than a single call come in during the before-mentioned nine-minute cycle. A wiring diagram has been prepared and it is planned to wire the system so that it will handle nineteen calls, one minute apart and register each on the locator, in the order they are received.

Those who have observed this system at work point out the fact that there is nothing particularly unusual about it that money could not buy—if the money were available. What is unusual, however, is the fact that every detail, including an annunciator, electric door opener and whathaveyou has been designed, built and installed by the volunteers, who claim that in its three years of operation there has not been a single failure.

Furthermore, they're willing and eager to demonstrate their "brain child" to all and sundry who may care to pay them a visit.

TARDY ALARM, WRONG ADDRESS CONTRIBUTE TO HEAVY FIRE LOSS

Top Two Floors of Apartment Building Gutted by Fire Originating in Living Room Couch

By Richard M. Adelman

A FIRE, which was described as the worst in 20 years, caused damage unofficially estimated at from $700,000 to $1,000,000, to an apartment building in Passaic, New Jersey, on April 19th. The blaze occurred in the five-story Tudor Apartments at Broadway and Gregory Avenue. The brick building was built in 1925, and contained 96 apartments and 13 stores, two of which were empty at the time of the fire.

Approximately 400 persons were left homeless by the fire, which began in a fifth floor apartment shortly before 7:30 P.M. It started when a five-year-old boy accidentally dropped or knocked a lighted candle under a living room couch. When his mother recovered it, the couch was already smoldering. She tried to douse the flames with a pan of water, but it was already too late. At the sight of an increasing volume of smoke and heat, the mother became panic stricken, and with three children, ranging in age from ten months to five years, she fled the apartment.

At this point, the fire was still minor in nature, and could have easily been controlled had an alarm been turned in without delay. The fear-struck mother, however, walked down five flights of stairs, with her three children, to the superintendent's apartment, and told him of the fire. In the meantime there was an attempt to control the fire with several soda-acid extinguishers, but no alarm was turned in, although several people by this time knew of the fire.

Finally a telephone call was made to the Passaic Fire Department, and the wrong address was given. At 7:43 P.M. a box was struck, and two engines, a truck, an emergency squad, Battalion Chief, and Deputy Chief responded. By pure chance, the Deputy Chief spotted the fire on his way to the wrong location, which was about ½-mile distance from the burning apartment. His driver pulled a box near the building, which incidently was the only box received for the fire. By the time apparatus did arrive, the fire had a great headstart and flames were coming out of the fifth floor windows. As fast as companies arrived, lines were taken up fire escapes to the fifth floor in an effort to halt the flames, which by this time extended into the cockloft and was breaking through the roof. At 8:12 P.M. a general alarm was sounded, bringing out the entire Passaic Fire Department, which consists of six engines (1,000 gpm), two aerial trucks, two pipe wagons, and an emergency squad. At this time calls also went out to the Clifton and Garfield Fire Departments for aid.

While firemen were trying to reach

Photo by Ed Pankow

Passaic firemen operate a deck pipe on the Broadway side of apartment building to wet down burning roof.

the seat of the fire, a stiff breeze whipped it through the cockloft and soon the entire roof area was in flames. Meanwhile showers of sparks and dense clouds of smoke blanketed the area, adding to the difficulties. Soon after the fire broke out, radio station WPAT, Paterson began broadcasting news of the fire, and a huge crowd, estimated at 7,000 people, jammed the downtown Passaic area. Some of the spectators, however, did a yeoman job in hauling long lines up fire escapes and around the building. Firemen were hampered by many tenants who locked their doors as they left the building, and caused more time to be wasted as weary fire fighters forced one door after another to gain access to apartments. It was also during this period that several rescues were made by firemen, police and bystanders.

By 9 P.M. outside help had arrived and gone to work. At the height of the fire, twelve streams from 9 hand lines, two deck pipes with 1½-inch tips and a ladder pipe on Garfield's aerial were operating on the fire. In addition to Passaic's apparatus, Clifton had one 1,000-gpm pumper working and one covering. Garfield had a 750-gpm pumper and a 65-foot aerial at work, and a 750-gpm pumper covering. Wallington sent an emergency squad to the fire.

The fire was brought under control shortly after 11:00 P.M., when the out-of-town apparatus was returned to quarters. The fire continued to burn until after midnight when it was reported out. Firemen were still on the job, however, at 8:00 A.M. the following morning. Approximately 40 of the 96 apartments in the building were either partially or entirely burned out. These were for the most part on the fourth and fifth floors. The roof was almost entirely burned off, and the rest of the building suffered severe smoke and water damage. Fire Chief William H. Coffey of Passaic was in charge of the fire.

Four Canadian Firemen Die in Suspicious Fire

Four firemen, three of them members of the Peterboro, Ontario, Fire Department, and the other a volunteer who was attempting to help, met death on May 19, last, during a fire which climaxed a series of unprecedented blazes in the neighborhood, most of them of suspicious origin.

The catastrophe struck while Ontario fire investigators were in Peterboro where they had been probing the other blazes. It was the most destructive of seven major outbreaks in less than a week.

The four fire fighters were trapped in the ruins of the collapsed upper two floors of a large four-story building in downtown Peterboro that housed modern stores on the main floor, offices above, and apartments in the top portion. The building was L-shaped, facing on two streets. It half surrounded another four-story brick joist structure on the corner and was separated from it by fire walls.

The burned out building contained these stores, all of which were gutted: Tip Top Tailors; Pulvers' Ladies Wear; Ed Riley's Men's Wear and the Agnew Surpass Show Store. Damaged by smoke and water in the adjoining building were a drug store, dry goods shop and stationery shop.

The fire was discovered by Constable Douglas Farthing about 5:15 a.m., when he saw a rear window of the shoe shop blow out and flames in the inside of the building. He turned in an alarm and hurried to the front of the building to awaken tenants of the apartments, three of whom had a narrow escape from death.

The fire spread rapidly and the building was quickly involved in flames.

Firemen fought the blaze for several hours from the outside, using ladder streams and hand lines, and from the interior lines were advanced to try to prevent the spread of the flames.

It was not until about five hours after the fire was discovered that the walls began to crumble, weakened by the hot fire. At about 10:45 A. M., when the fire was believed under control, the main rear wall of the building fell. This was followed by further collapse. Six men were trapped when the floor on which they were operating dropped into the center of the building.

Fellow firemen rushed to rescue the victims. While this effort was being made, a wall fell in on three other firemen, two of whom were pulled to the street with serious injuries. Two other firemen had been injured in other mishaps earlier, during the height of the fire.

All city ambulances were rushed to the scene. Six times within five minutes men were carried out, placed in the ambulances and dispatched to the hospital. At 11:00 A.M., fully six hours after the fire started, police were still calling for more ambulances.

The four dead were finally removed from under 12 feet of wreckage and rubble hours later. They were listed as: Grover Beck, Orville Rome, George Reynolds, all city firemen, and Earl Spenceley, well known city florist, who volunteered as a fire fighter. Admitted to Peterboro Civic and St. Joseph hospitals were: Adelard Binnette, Robert Reynolds, Peter Nicholson, John Laplante, Victor Barrie, Harold Black and Virgil Car, assistant chief. Later John Masters and William J. Bloom, firemen, were taken to Civic hospital. Two other casualties were Hubert Kennedy, whose foot was broken in a fall from a ladder, and volunteer fireman Robert Webb and William Bloom and John Masters, also firemen.

Injuries to firemen reportedly incapacitated one-third of the entire fire fighting force of the city. Normally 15 firemen work on each of the three daily shifts. All off-duty firemen were called when Chief George Smith took charge.

While crowds estimated at 10,000 persons silently watched, firemen removed dangerous sections of wall and dug in the ruins to reach the dead.

Peterboro's wave of fires started a week to a day before the major and fatal blaze, when a house on the city's northern outskirts was entered while its owners were away and two fires were started inside, one in a bedroom and one in the basement. Five days later the house immediately next door burst into flames.

Four district fires were also reported in the period, some of which occurred under suspicious circumstances. The Sunday before the fatal downtown fire, a $10,000 blaze broke out in nearby North Monaghan township; the next day a house was gutted in Douro township. On Wednesday the Moldaver Lumber Company burned with $25,000 damage, and a serious sawmill fire broke out at Apsley, 40 miles north of Peterboro.

The fatal fire of May 19th caused estimated property loss of $500,000.

Shortage in Firemen's Funds

Shortages of an estimated $50,000 were discovered in funds of the Spokane Fire Department's credit union, it is reported. Captain Edward Obde, credit union president, said a state audit had been requested. He said several members of the department, including top officials, have invested their life's savings in the union.

Meanwhile a deputy coroner is investigating the sudden death of Capt. Robert Smee who was secretary-treasurer of the credit union for more than 15 years. The captain and Fire Chief James Blamey were discusing the affairs of the credit union when the captain became violently ill. He died a short time later.

Peterboro, Ont., Firemen Fighting Blaze That Killed Four.

Upper floors of old downtown multiple occupancy building involved before their collapse, which trapped many firemen, killing three regulars and a volunteer. Origin of fire, which caused loss of $500,000, was considered suspicious.

Truman Forms Advisory Civil Defense Council

A 12-member Civil Defense Advisory Counsel has been appointed by President Truman, to consult periodically with the Federal Civil Defense Administration on general policy.

Appointed for one year are: Governors Frederick G. Payne of Maine; Frank J. Lausche of Ohio, and Luther W. Youngdahl of Minnesota, and Mayor Martin H. Kennelly of Chicago. For two years: Mayor William F. Devin of Seattle; Mayor David L. Lawrence of Pittsburgh; Dr. Lillian M. Gilbreath, Industrial Engineer of Montclair, N. J., and Robert L. Smith, publisher Los Angeles *Daily News*. For three years: Former Senator Harry Darby of Kansas; Mrs. Mary McLead Bethune, negro educator of Tampa, Fla.; George J. Richardson, secretary-treasurer International Association of Fire Fighters, Washington, D. C., and Silliman Evans, president, Nashville *Tennessean*.

Japanese Railroad Coach Fire Kills Many*

Japan's fifth worst railroad accident since its State railway service was established in 1872 claimed the lives of 105 persons, including seven G. I.'s, on April 25, 1951.

The tragedy occurred when the leading carriage of a wartime-built "T 63" electric train took fire and became an incinerator for most of the passengers who were in it. The fire was caused by a dangling overhead power line which became entangled with the train's pantograph as the line scraped the roof of the train, just about to pull into the Sakuragicho Station at 1:40 P.M.

The motorman slowed down when he saw the low wire but was unable to stop. The top and fore end of the coach, which were of flammable construction, took fire immediately and, according to witnesses, was burned out within 3 minutes.

The wrecked train, similar to many other wooden wartime models, had doors that were controlled electrically. These doors jammed when the power went off. The windows of the coaches were triple-paned and required considerable strength to break, making it almost impossible for a passenger to force his way out.

The doomed passengers met death or were seriously burned while frantically trying to escape from the inferno. Sixteen passengers remained in the hospital following the accident, one of them in critical condition.

It is reported by eye witnesses that the ill-fated train skidded 30 to 40 meters to a halt after a blue spark ignited the roof. About ten persons managed to crawl out of the windows of the first car, to crash to the pavement which parallels the elevated track at the point of the accident. The second car ignited from the first and was partially consumed. Most of the occupants of this coach are reported to have escaped.

Following the disaster, the motorman, Akira Nakamura, the conductor, Harup Oya, and two repairmen, Sadao Hasegawa and Shimazo Takei, who were working on the right of way at the time and were reported responsible for the drop in the power line, were questioned, together with eye witnesses and survivors.

The investigation brought out the fact that the head car was practically full as it left Yokohama station. The fire first involved the upper part of the operator's cabin of the head car and spread rapidly. The air compressor doors would not open due to failure of the electrical controls and occupants fought to reach exits, or break out windows to escape. In addition to burns, most of those who dropped to the pavement suffered injuries.

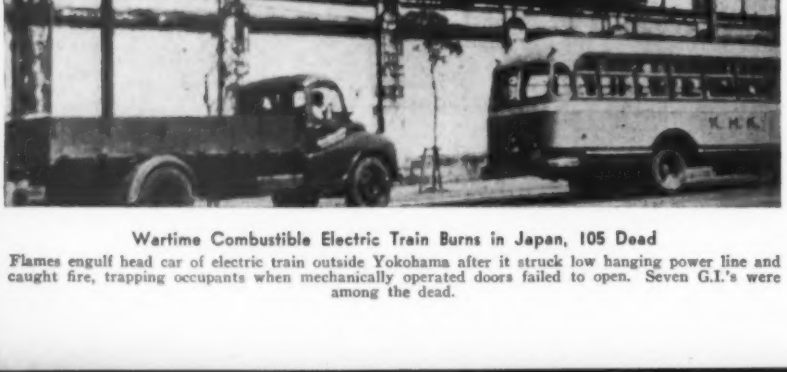
It is disclosed that car doors opened inward, and that there was a triangular door-opening safety cock located in a compartment but nobody apparently thought to, or was able to, operate this emergency release. Also it is reported a safety valve is located under each seat in this type cars which, when operated, will release doors.

Following the tragedy, Transportation Minister Takeshi Yamazaki declared he wanted all wartime-built model T63 electric trains remodelled. Immediately after his pronouncement, some 1,835 coaches on the railways had their compartments housing the triangular door-opening safety cock painted bright red. Posters also were hung in each separate coach with detailed information on how to operate the safety cock under the seats to open all doors. All safety valves were painted red.

Further preventive measures included (1) keeping a stricter watch on the condition of power lines; (2) instruction of passengers on how to open the doors of coaches in such an emergency; (3) remodelling of coaches so as to have front and rear doors opening out, instead of opening in as heretofore, to facilitate egress.

The railway corporation also decided to (1) remodel present three-paned windows into the two-paned type; (2) create new regulations instructing motormen of trains to stop a certain distance from the scene of repairs.

*Fire Engineering is indebted to Mr. Toshinaga Kawato, Chief of Secretariat, Tokyo Metropolitan Fire Department, for the information upon which this account is based.



Wartime Combustible Electric Train Burns in Japan, 105 Dead

Flames engulf head car of electric train outside Yokohama after it struck low hanging power line and caught fire, trapping occupants when mechanically operated doors failed to open. Seven G.I.'s were among the dead.

Mutual Aid Works at Battle Creek Blaze

Not so many years ago all was not harmony between Battle Creek City and Battle Creek Township fire forces. Recently, differences were reconciled, and the harmonious relations paid off in dividends on the night of April 15th, last, when the Battle Creek Township fire fighters came in to cover the city while all the latter's fire forces were fighting to confine a half million dollar blaze that burned out a clothing and a department store and threatened entire downtown Battle Creek.

While the Battle Creek department was occupied at the major blaze, the Township firemen were called to extinguish a fire in a coal hopper.

The Battle Creek area suffered a number of serious fires in the spring. Two fires at the Eaton Manufacturing Company, just outside the city, caused heavy loss, and a number of mercantile fires in the city gave Battle Creek fire fighters plenty of work.

The climax apparently was reached when fire of undetermined origin practically destroyed the 60-year-old, three-story building known as the Morgan Block, housing Brandl Bros. clothing store and the Powers, Inc., department store at 20-22 West Michigan avenue, in the heart of downtown district.

This fire was discovered by a couple of men who were window-shopping about 11:35 P.M., and noticed smoke in the clothing store. They hurried to the quarters of No. 1 fire station nearby to sound the alarm. By the time these and other firemen had reached the scene, flames were visible through the rear first floor barred windows, and heavy smoke was emitting from all crevices of the structure.

Additional calls brought practically the city's entire fire department and summoned all off-duty men into action. Unable to penetrate the wall of smoke, firemen donned breathing apparatus but even with these the excessive heat and blackness made interior fire fighting next to impossible. Lines therefore were operated from the rear, from the fire escapes, and from street level and ladders in the front. At times the pall of smoke shut out the department's most powerful flood lights.

About 12:20 A.M., firemen were encouraged in their fight when rolling smoke appeared to be turning to steam, indicating that water was reaching the seat of the fire. But the blaze in the rear continued unabated as the upper

floors became involved. At 1:00 A.M., ladder pipes from the city's two aerials were directing heavy streams into the roof area, but the fire steadily ate its way through center of the structure. Firemen working up fire escapes in the rear ell of the adjoining jewelry store worked desperately to prevent extension of the blaze into that and other structures.

At 1:15 A.M., the fire burst through the roof as sections of the upper part of the building caved in. At 2:00 A.M., Fire Chief Charles Crosier announced that the department hoped to confine the fire to the Morgan Block and keep it from Godfrey's jewelry store and the Weickemant building. But, about ten minutes later, the wind-whipped flames spread to the roof of the Kapp Block, housing Stevenson's camera shop, and into the third floor at 24-26 W. Michigan street.

At 1:49 A.M., an alarm was transmitted for a fire in a coal hopper at 417 W. Van Buren street. The Grand Rapids Township firemen, who were covering the city in the emergency, responded and were joined by two pieces of apparatus withdrawn from the major fire. This blaze was quickly controlled and the Grand Rapids municipal fire fighters returned to renew their struggle with the West Michigan avenue blaze.

At about 2:30 Fire Chief Crozier collapsed. He had been in and out of the smoke charged fire building and was believed partially overcome by the smoke and fumes. He remained conscious, however, and was removed to the hospital in an ambulance for treatment. Assistant Chief Robert Smith and Battalion Chief Rolland Hess assisted Chief Crozier in directing operations.

One fireman, Richard Phelps of No. 1 Station, was overcome by smoke but after receiving first aid returned to the fight. Firemen operating in the rear early in the struggle were handicapped by power wres, which were later deenergized. The surging crowds also caused some inconvenience as news of the fire brought several thousand to the scene.

Insurance adjusters placed the property loss at $500,000 and began an investigation into the cause of the destructive blaze. Chief Crozier doubted if the origin ever would be known. He stated that the fire began in the basement of Brandl Bros. store, but the extreme heat, which turned the streams from the first two lines directed into the interior of the store to steam, notwithstanding their 500 gallon per minute discharge, undoubtedly consumed all evidence that would help determine the cause. Firemen also expressed the belief that the fire had been burning for some time before discovery.

55th Annual N.F.P.A. Meeting Well Attended

The 55th Annual Meeting of the National Fire Protection Association, held in Detroit at the Hotel Statler, May 7 to 11, was attended by over 1,000 registrants.

The program was a busy one, marked by numerous sectional sessions and committee meetings.

Fire Commissioner Paxton Mendelssohn of Detroit welcomed those of the Fire Marshal's Section on the 7th and, with Fire Chief Ninian Higbee and a large staff of officers and men, saw to the comfort of all the delegates and their ladies.

A large number of foreign fire prevention and protection officials were present as were many representatives of the fire service from the Dominion. Among them were H. M. Smith, Inspector of Fire Services, Home Office, London, Eng.; C. A. Thompson, Dominion Fire Commissioner, Ottawa, Ont., and Major General F. F. Worthington, Civil Defense Coordinator, Ottawa, Ont.

A meeting of the Fire Apparatus Committee, George L. Swan, Acting Chairman, was held on Thursday. There was considerable discussion also on the subject of the relation of used and obsolete fire apparatus to insurance credits.

The Committee on Firemen's Training met earlier in the week, with Dr. W. A. Ross presiding. Among the subjects discussed were the manual on pump operation, training for mutual aid and other projects. Chief Roi Woolley, substituting for Committee member Fred Shepperd, was instructed to proceed with an outline of a training course for mutual aid.

Representatives of the fire service took a lively interest in the several sessions on civil defense. The meeting of the N.F.P.A. Committee on Civil Defense held on the 11th, with John A. Neale, chairman, was well attended. Among those present were Chief John Alderson, Pres. International Association of Fire Chiefs; Loren Bush, Chief Eng. Board of Fire Underwriters, San Francisco, Cal.; E. W. Hall, Fire Marshal, Detroit; Edward Kehoe, U. S. Atomic Energy Commission; George J. Richardson, Sec.-Treas. International Association of Fire Fighters; Leonard C. Lund, Deputy Commissioner, St. Paul, Minn.: Dr. W. A. Ross, Consultant, U. S. Office of Education, Washington; Max W. Rote, Jr., Asst. Dir., American Red Cross, Washington; Spence D. Turner, Chief Forster and Fire Warden, Los Angeles County, Cal.; Chief Roi B. Woolley, FIRE ENGINEERING; Jack Hayes, State Director of Civil Defense, Oregon, and his Deputy, M. J. Gilson; Harold P. Bowhay, Chief Fire Officer, State of California; Kyle P. Laughlin, Director, Fire Services Division, U. S. Civil Defense Administration, Washington; C.

Members of the Firemen's Training Committee, N. F. P. A., in session at Detroit, Mich., on May 11.

Fire officials try out old steamer.

Left to right: Chief Fire Marshal Martin Scott of New York; Albert H. Pike of the National Board of Fire Underwriters and Commissioner Paxton Mendelssohn, Detroit Fire Department, at the Edison Institute, Dearborn, Mich., during the recent N. F. P. A. convention in Detroit, Mich.

A. Thompson, Dominion Fire Commissioner, Ottawa, Ont.; and T. Murray Jacobs of the Ontario Fire Marshal's Office, Toronto. Horatio Bond, N.F. P.A., acted as secretary.

Dallas Fireman Killed by Exploding Drum

On Friday, May 4, the Dallas Fire Department had just changed shifts, at 11:00 A.M., and among those who had sat down to eat lunch was fireman Andrew A. Schellenberg of Station 26. Andy, as he was popularly known, was second driver on Engine 26, but that day he was acting officer in charge of the unit in the absence of Captain H. L. Russell.

He had hardly taken more than a bite out of a sandwich and a sip of his coffee when the "main line" rang in at the Station. This was at 11:29 A.M. and Lieutenant Bob Robinson picked up the receiver and immediately pressed the button controlling the house bells. All firemen hurried to their apparatus.

The Lieutenant quickly hung up the instrument, stepped to the engine room door, and told Schellenberg to take the engine to 3509 Canada Drive where there was a house on fire.

The location of the reported fire was in West Dallas, in the County, about four miles from the station of No. 26 and beyond the city's water supply system. It was later determined that the fire was started by two negro children in some grass, from which it spread to a one-story frame dwelling.

As Engine 26 pulled in, it was apparent that there was little opportunity of saving the house, which had caught fire from the burning grass. Quick action, however, might prevent extension of the fire to a similar adjoining frame house, providing the available water carried in 26's booster tank (250 gallons) held out long enough for reinforcements to arrive. There were no fire plugs within a mile and Schellenberg, quickly grasping the situation, picked up his 'mike' and radioed the dispatcher to send another engine to his assistance immediately. He then turned to his fellow fire fighters, Engineer H. B. Durham, L. A. Milke, R. B. Tester, and M. J. Warren, and told them to lay in with the big booster line to protect the exposed dwelling. Engineer H. B. Durham remained at the pumper.

Photo by Linwood J. Martin

Here is the crew of Dallas Engine 26, including Fireman Andrew A. Schellenberg, killed at a dwelling fire shortly after this picture was taken. Shown here, filling Engine 26's booster, are (left to right) Engineer H. B. Dunham, Fireman M. J. Warren (at plug), R. B. Tester (on top of rig) and Andrew A. Schellenberg, the victim, holding hose.

Schellenberg became uneasy when his engineer said "Andy your water is getting low," but just then he heard the siren of Engine 18 in the distance and knew aid was at hand. Members of the latter crew were wasting no time reaching the scene, knowing from the special call that their fellow-firemen had their hands full. Schellenberg must have breathed a sigh of relief as No. 18 pulled in and stretched their big booster, just as the water in Engine 26's booster was exhausted.

As No. 18 went to work, Schellenberg told part of his crew to get to the nearest fire hydrant, located about a mile away, and re-fill their booster tank and that he would remain at the fire, which by this time had practically consumed the first house and was involving the siding of the second.

Lying on the ground by the side of the blazing structure was a 55-gallon kerosene drum, nothing particularly unusual in that area. The fire fighters had hit this drum with their stream several times to cool it down, but this was incidental to the problem of preventing the spread of the blaze to adjoining property, which claimed most of their attention, and their scant supply of water.

Meanwhile the drum with its contents was absorbing heat and becoming more dangerous every second, although not perceptably so.

At 11:44 A.M., without any warning, the innocent looking drum exploded, sending the head of it in one direction, the drum itself flying in another to strike Schellenberg full in the chest and head, knocking him 21 feet and killing him instantly. The victim had only just stepped back about 33 feet from the drum to watch for the return of his own engine. A few feet either way and he would probably not have been injured.

The destructive container after felling Schellenberg, flew on to strike the side of engine 18 which was located 18 feet behind Schellenberg. The terrific impact badly dented the apparatus, but fortunately no one was struck.

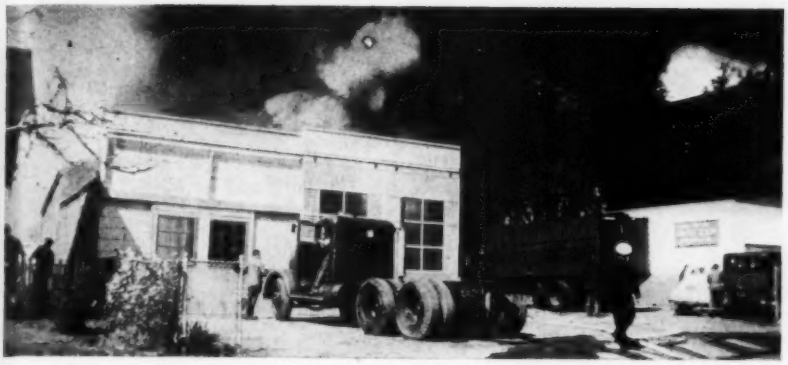
Deputy Sheriff F. M. Buckalew, who had answered the fire call and was about 75 feet from the drum when it exploded, was almost knocked to his knees by the concussion. He and his partner H. F. Dahn, with the help of Fireman Warren, quickly placed Schellenberg in their squad car and rushed him to the hospital, only to find that their efforts were in vain.

The tragedy of his death, coming as it did from a fire of reasonably small magnitude, and from a totally unsuspected cause, once again emphasizes the uncertaincies and dangers of the fireman's calling. It is idle to speculate on "what might have been," in this particular accident, for tragedies of this kind dog the fire fighters' footsteps at every turn. However, it may be well for those who read of the loss of this gallant fireman to make a mental note to treat all containers of whatever nature that may be exposed to the heat of a fire, with suspicion and distrust.

Aknowledgement: The editors acknowledge the assistance of Linwood Martin of the Times Herald Press Room, Dallas, for his account of this tragedy. Schellenberg was 34 years old and, with the exception of a 4½ year hitch with the Navy, had been a member of the Dallas' Fire Department since 1941.

Photo by Linwood J. Martin

Dallas Fireman Bill Wheeless shows remains of kerosene drum that blasted life of his close friend, Fireman Andrew A. Schellenberg, during a dwelling fire. Fire fighters prevented involvement of house shown in rear, by effective use of booster lines.



Stockton, Calif., fire as the firemen went into action.

Stockton Firemen Control Threatening Fire

A spectacular fire swept through a paint shop, destroyed a 2½-story frame dwelling, some 20 vehicles, including a $17,000 truck and trailer, just outside Stockton, Calif. Two other buildings also were damaged before the fire was controlled by county and city firemen. Chief County Fire Warden Walter Cady estimated the damage at $100,000.

The fire apparently started in an oven used to dry newly painted cars about 2:10 P.M. and, fanned by a strong northwest wind, it spread rapidly among the various structures on the property located a block outside the city limits of Stockton.

The first company to respond in answer to the alarm was made up of volunteers. By the time the pumper backed down the dead-end street upon which the buildings were located to lay hose lines the fire had become an inferno.

The Stockton Fire Department was summoned at once and responded promptly, bringing additional lines to bear both on the raging fire and the exposures. Buildings across the street from the burning paint shop grew so hot from radiated heat that they had to be kept wetted down to prevent ignition.

Men braved the heat to move trucks that were in the path of the flames to safety.

Press accounts reported that Art Piper, son of the owner of the shop was "overcome by smoke and fumes from a gas bomb which he had thrown to quell the flames." No verification of the type or kind of "bomb" used, or of the nature of his injuries, has been received. During the fire, however, there were several minor explosions caused, it is said by paint, and the gasoline and oil in the vehicles in the shop. These explosions accelerated the spread of the flame.—L. W. Crosby.

Lake County, Ill., Gets Radio Network

Nineteen public service agencies of Lake County, Ill., are joined in a county-wide radio network to facilitate their fire and police communications.

Police stations in 12 towns of the area and volunteer fire departments in seven of the towns are linked to a master transmitter and receiver located near Libertyville, Ill. Selective coded controls enable the station to "cut in" or "cut out" all towns not concerned with specific messages.

The hub of the network is a modern, one-story building housing the equipment, which was jointly designed by Harry Quandt, World War I Navy radioman, who is in charge of the system, and Motorola, Inc.

Anticipating every imaginary emergency, Quandt foresaw the breakdown of equipment in event of a serious fire, flood or other acts of nature. He arranged to install stand-by power in the form of a 10-kw Kohler electric plant, powered by gasoline, which automatically swings into action if public power fails.

Fifteen years ago Quandt and the late Sheriff, T. E. Kennedy, donated $200 for setting up a county radio equipment fund. Until then a 50-watt transmitter was all the department had. But Mr. Quandt was so interested that he rode a traffic motorcycle by night and studied police communications in Chicago by day.

After convincing the county authorities that a county wide system was desirable, and several communities had agreed to join the network, one stymie remained. The law permitted no such inter-city cooperation. So the Illinois legislature obliged by changing the statute. Now, all the towns pay a service maintenance charge and their fire and police activities benefit greatly from the modern communications available to them.

Juvenile Fire-Setter Caught

"I know what you want me for," said a 12-year-old Norwalk, Conn., girl recently when Police Lieut. Edward Rooney walked into her home.

"Why?" rejoined the officer of the law.

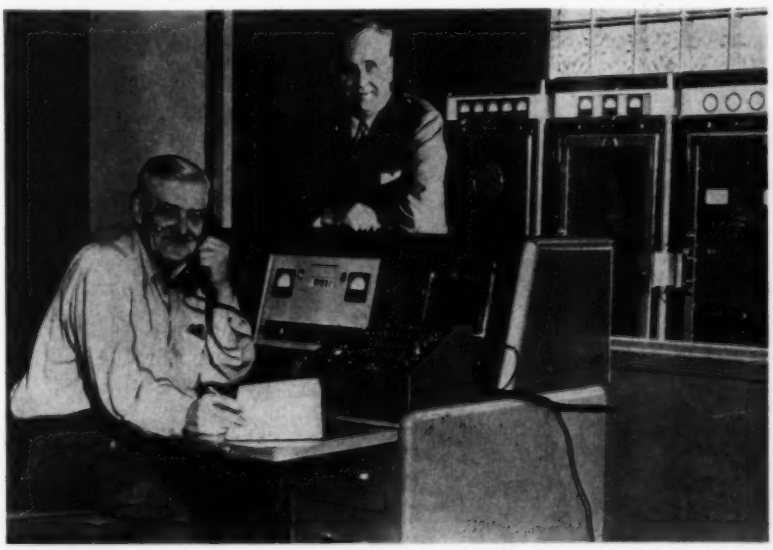
"Because I set fire to that store last summer."

And within a few minutes police and fire officials in that Connecticut city had the answer to a puzzle they had been investigating more than 10 months: Who started a fire on June 18, 1950, that caused more than $15,000 damage?

The "break" came in this manner: Lieut. Rooney had been questioning children in the neighborhood concerning a false alarm of fire, when the girl burst out with her confession.

The fire, which State and Norwalk police had put down from the first as of incendiary origin, damaged both the Sears-Roebuck and Norwood Shoe Company stores, located on Wall Street. Insurance companies paid $11,450 for damages to the contents, and the sum of $4,187.50 for damage to the building. As the girl related details, she and a nine-year-old brother started the fire, but it was an accident. The girl explained that her family was preparing to go on a picnic and needed boxes in which to put the lunches. She and her brother went to the rear of the building. They searched a parking lot without finding any box. Then they entered an enclosed space, which was dark. The brother, she said, had found some matches, and she took one and lit is.

A moment later there was smoke—the match had fallen into a barrel of rubbish. Both were frightened and ran home, saying nothing to their parents about the incident. Because of their ages, the children could not be arrested. The case was turned over to juvenile authorities for disposition. TOM MAGNER



A pioneer in police radio work is Harry Quandt of Libertyville, Ill., shown sitting at the control panel of the equipment he designed and helped to engineer. With him is Chief Deputy Sheriff Walter L. Atkinson.

News of the Manufacturers

National Foam Advances Souder

Laurence H. Souder has been appointed Executive Vice President of National Foam System, Inc., West Chester, Pa.

Laurence H. Souder

Mr. Souder became Executive Vice President after 43 years of association with the present management. He is well known throughout the fire protection field.

Mr. Souder will continue to make his headquarters at the main plant in West Chester, Pa., where all types of foam fire protection equipment are manufactured.

Fire Extinguisher Guide

A general line folder, covering their complete line of portable and special purpose fire extinguishers, has just been published by Stop-Fire, Inc., 125 Ashland Place, Brooklyn, N. Y. A handy chart provides an easy-to-use guide for selecting the right extinguisher for each type of fire hazard in industry, institutions and the transportation field. Chlorobromomethane and all standard, approved extinguishing agents are used in this line of equipment.

Self-Adhesive Safety Signs

A new type of self-adhesive safety signs has been introduced by W. H. Brady Company, Chippewa Falls, Wis., under the name of "Quick-Label" for marking fire extinguishers, exits, no smoking areas, etc.

The Brady signs are mounted on handy dispenser cards. They may be quickly removed from the cards and instantly applied. They stick without moistening to any clean surface—windows, walls, machinery, etc. Anyone can apply them and they are easily readable. A wide selection is stocked and special signs also are available.

These safety signs are reported inexpensive, take but a few moments to apply, require no screws, lags, or bolts. They conform to the ASA Standard Z35.1-1941 for Industrial Accident Prevention Signs developed by the ASA and National Safety Council.

Helpful Booklet on Communications

"This Message Must Get Through" is the title of a colorful, timely 16-page booklet just published by The Leece-Neville Company, Cleveland 4, Ohio, makers of the Leece-Neville Alternator System.

The booklet is more than a "guide to mobile communications for civil defense," as its sub-title indicates, it contains considerable helpful information on modern radio communications and their application to fire and police. Copies may be had by addressing the above company.

Fire Truck to Utilize Three Per Cent Foam

Mack Manufacturing Corporation recently delivered to the Allentown Fire Department, Allentown, Pa., the first pumper designed to use three per cent foam liquid.

Mack Foam unit recently delivered to Allentown, Pa.

This new pumper is equipped with a 750 GPM fire pump, a 50-gallon foam tank to hold the three per cent liquid, foam nozzles, proportioner, and all necessary metering devices and controls.

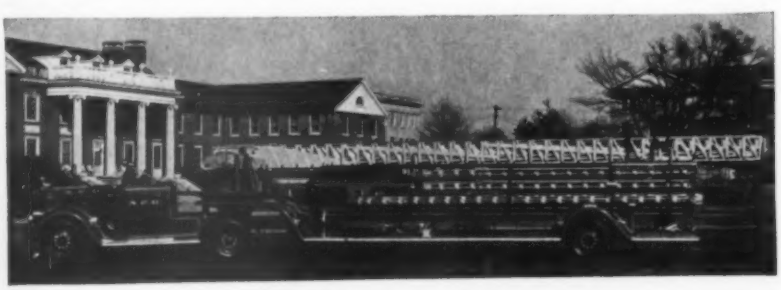
Previously the apparatus of pumper foam trucks was engineered for a six per cent concentrate liquid. National Aer-O-Foam three per cent, manufactured by National Foam System, West Chester, Pa., was selected for this new unit.

New Edition of "Fire Station Design" Issued by Circul-Air

Volume 3 of its popular book, entitled "Fire Station Design," has been released by Circul-Air Corporation, of Detroit. Over 6,000 of the previous two editions were requested and used as reference works in connection with new fire station projects during the past three years.

Editorial material was contributed by FIRE ENGINEERING, Chief Roi B. Woolley, Assistant Editor; the National Board of Fire Underwriters, and other authorities. The new edition has 52 pages and cover and illustrates and describes 66 modern American and Canadian fire stations from the large central fire headquarters type to the small bungalow and residential designs. Included are combined fire stations and city halls, township halls and multi-purpose buildings. The cover treatment shows the new Station No. 18 of the Los Angeles Fire Department.

This brochure should be in the hands of every fire chief, architect and builder catering to the fire service. Copies may be had gratis, postpaid, upon request from any fire chief, commissioner, mayor or other municipal official or others connected with the fire service, as well as architects, libraries, etc. The address is Circul-Air Corporation, 574 E. Milwaukee Ave., Detroit 2, Michigan.



Aerial ladder goes to college

The photograph above shows a Peter Pirsch Senior 100-foot tractor-trailer aerial ladder truck recently delivered to the City of Athens, Ga., home of the University of Georgia. The building in the background is Rutherford Hall, one of the units of the University. The University of Georgia is the oldest chartered State University in America, dating back to January 27, 1785.

John Bean Offers Unique Identification Cards

Civil defense has centered attention on the wisdom of all members of the fire service carrying proper identification cards. Although most fire fighters have membership cards of their fire departments, companies or associations, these are not strictly means of identification. The true identification card should carry photo, finger print and other essential data. And the card offered by John Bean Division, Food Machinery & Chemical Division, provides room for that information.

These cards fold to the average membership card size and are made of bril-

(*Continued on page* 466)

When the heat's on...

Depend on Eureka for "cooling out" the job, with no twisting, no whipsaw, or loss of pressure. You can also count on Eureka because its

BALANCED-WEAVE CONSTRUCTION, in both multiple-woven and double-jacket hose, eliminates dangerous writhing and twisting under high pressures.

SMOOTH-INTERIOR FILLER PLY prevents "washboarding" of rubber lining, reduces friction loss so that you get better nozzle pressure without increase in pump pressure.

MILDEW-PROOFING: Double-jacket hose can be furnished antiseptically treated or wax and gum treated to prevent mildew and rot.

BOMB-TESTED RUBBER LINING guarantees longer wear.

EUREKA

"For greater protection to life and property"

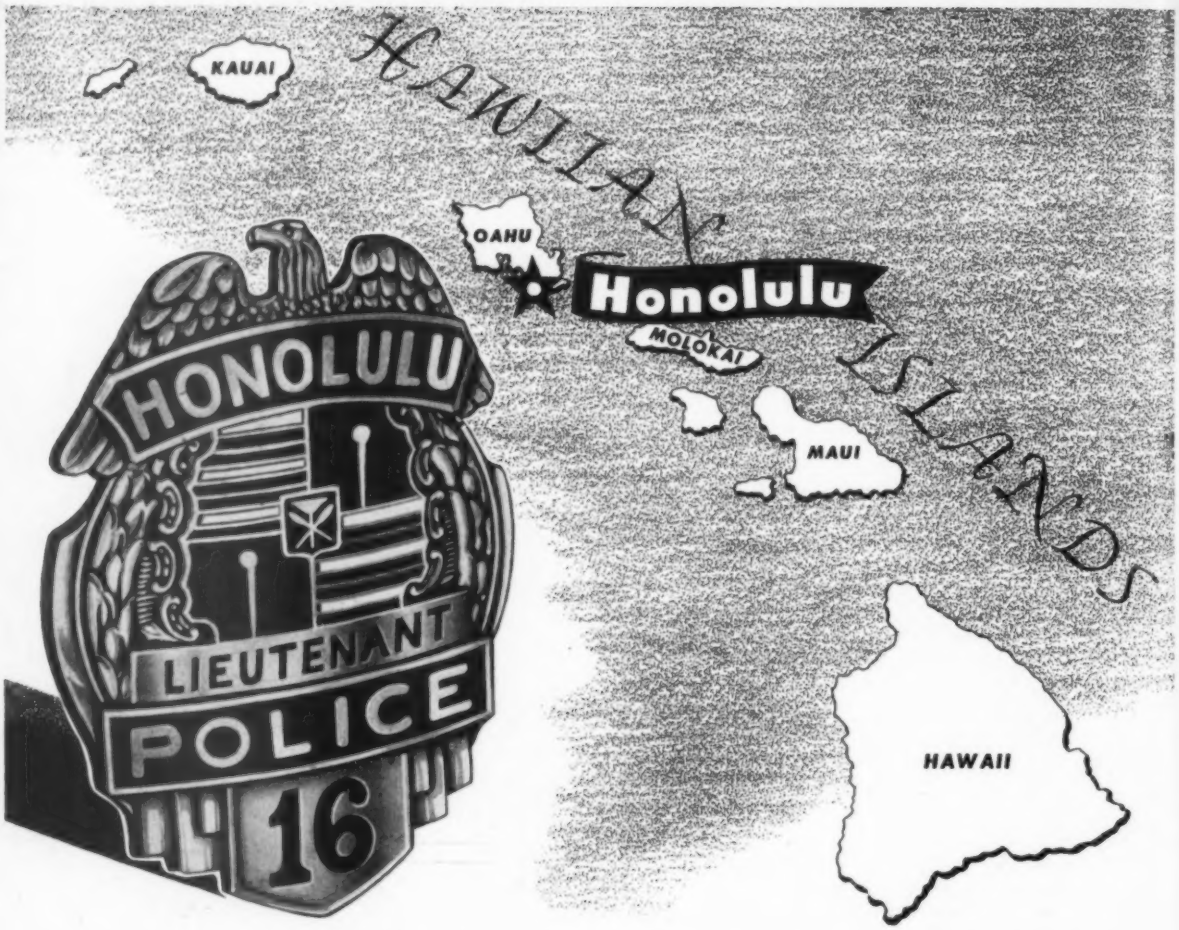
EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Cotton Rubber-Lined Fire Hose

195 Hudson Street • New York 13, N. Y.

Division of United States Rubber Company

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*



"CROSSROADS OF THE PACIFIC"

Hula skirts, grass huts, Waikiki Beach, ocean washed shores — this is Honolulu, a picturesque spot indeed.

When the Honolulu Police Department asked us to design a distinctive badge we put our hearts into it and came up with this outstanding badge.

Truly representing the spirit of Honolulu, this badge is uniquely designed around the official Hawaiian coat of arms which is colorfully enameled in red, white, blue, green and yellow. Every detail in design and coloring was carefully planned and executed by skilled badge craftsmen. Nothing was overlooked — and we believe the Honolulu Police Department now has one of the finest and most colorful badges in the world today.

Ask your BLACKINTON dealer about this special design service the next time he calls.

BLACKINTON

V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS.

Blackinton manufactures badges for plant protection and civilian defense

Short Cuts and Gadgets

TWO IDEAS FROM WALLA WALLA, WASH.

Fire Chief Frank A. Maddux, V.A. Hospital, Fire Department, Walla Walla, Wash., long a contributor to FIRE ENGINEERING, comes up with two suggestions for this page. He wishes it knowns that the "short cuts" are the work of two members of his fire force and not his own. They came about as improvisations when insufficient departmental funds made it necessary to contrive them—or go without.

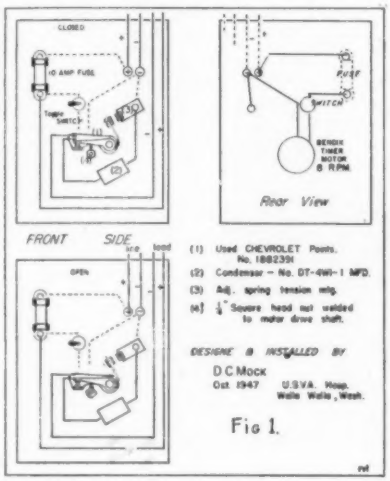


Fig 1.

The first "Short Cut" is a blinker warning light, which was the creation of D. C. Mock, who contrived it out of a discarded timer motor and points from a motor vehicle, together with a spring tension mounting and radio condenser wired through a toggle switch. The mechanism is mounted on a bakelite plate inside a metal box with necessary wiring from the line load to power load. The general wiring idea is shown in the accompanying Fig. 1. This blinker warning light signal is located at the main

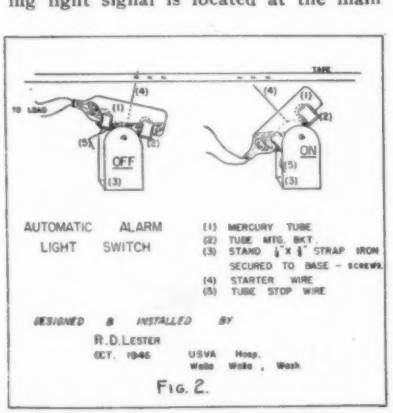


Fig. 2.

entrance of the Veterans Hospital grounds.

The second "Short Cut" is the work of Fire Captain R. D. Lester, also of the V.A. Fire Department, and is an automatic alarm switch designed to turn on the lights in the firemen's dormitory in the event an alarm is received day or night.

Capt. Lester uses a mercury tube mounted on a stand, wired to the dormitory light circuit, installed under the fire alarm register tape. At the opening of the circuit the switch automatically is tripped. Wiring is diagrammed in Fig. II.

Thanks, Chief Maddux—and congratulations to your two contributors.

* * *

CANNED WATER FOR C.D.

If, and when that atomic attack comes, one of the problems will be supplying fire fighters on the fire ground with uncontaminated water.

A Boston research man, Dr. Myer Selby, is said to have developed "canned water" which may help solve this problem.

"Canned water" was developed for the Air Force. Oddly, it is more difficult to can water than most foods because it takes on the taste of the can or can lining. Doctor Selby's method keeps water both sterile and palatable.

* * *

KEEPING ATTENDANCE OF VAMPS AT FIRES AND DRILLS

One of the questions often asked the editors of Fire Engineering is what is a good method of recording attendance of volunteers at fires and drills?

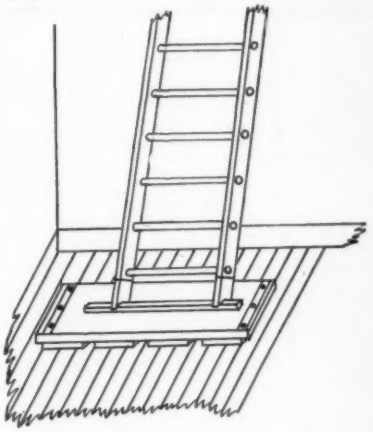
There are a number of different practices followed by volunteer departments throughout the country. Here is the way the Linden, Mich., Fire Department handles this detail, according to Elliott A. Cranston, of that department.

At the beginning of the village fiscal year, the chief gets a sheet of bristol board, approximately two by three feet in size. This is ruled both ways, leaving a space at the left for the roster of members and across the top. After returning to quarters following a fire or drill, the chief fills in the top space of the vertical line with the date, location and name of property owner. Opposite each fireman's name attending, he places a small star or flag sticker. This makes a neat, easily checked record. Since no fireman actually accepts any pay for the run, but turns in his time for the department as a whole, this record is turned over to the village clerk at the end of the year and the department receives a lump sum.

Mr. Cranston adds this further bit of information: As this department services a territory covering two whole townships, and parts of four others, we carry in our truck a pad of blanks in duplicate with the following entries: Date & Time; Name of Person Calling; Name of Property Holder; Location; Estimated Loss; Length of Service; Signature of Property Owner or His Tenant, and space for names of firemen attending. Firemen are paid by the run by whatever township the fire was in and it is a simple matter for our village clerk to mail the township board a copy containing all information regarding the fire along with the statement for service.

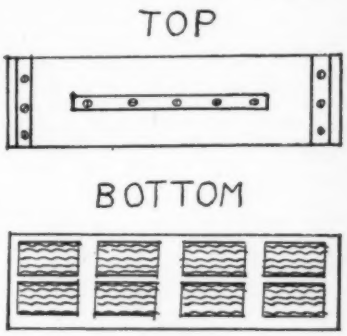
IDEA FOR LADDER FOOTING

Made up from scrap material, a device that will provide a secure footing for ladders when used on smooth flooring, is shown in the accompanying sketch.



Although seldom needed, it will be found well worth the little space it takes up on a ladder truck, when a job turns up requiring the use of a ladder inside a building.

This gadget can be made up from a piece of hardwood board, about four feet long and twelve or fourteen inches wide; an old table leaf is ideal. Secure a cleat of wood or metal along the top center and a couple of pieces of strap iron across the ends, for added strength.



The bottom is shod with sections of old auto tire tread. Almost any scrap heap will yield a tire with broken side walls but still having a good tread. The tire is cut up with a hack saw into sections the width of the tread and about eight inches long, which are fastened to the bottom of the board with roofing nails, having the ribs of the tread running lengthwise with the board.

In using this device under a ladder butt, added grip may be obtained by men standing on the board or loading it down with any heavy material that may be at hand. HENRY T. HANSON.

* * *

DRILL'EM IN THE DARK—TO BE DIFFERENT!

One of these nights when you want a different sort of drill, douse all lights on apparatus floor, then send in men to locate designated tools and equipment on apparatus and take to lecturer or officer in charge, in another room, and explain their respective uses and purposes.

FALSE ALARMS

Yarn

"I am a representative of the Itchy Wool Company, madam. Would you be interested in some coarse yarns?"

"Indeed, yes. Come right in and tell me a couple."

Don't Sleep

It was the morning after, and the irate wife was giving her suffering husband no peace. "If you hadn't drunk so much last night, you wouldn't feel so horrible this morning," she said.

"Drink had nothing to do with it," he moaned. "I went to bed feeling wonderful, and woke up feeling awful. It was the sleep that did it."

Angry Motorist: "Say, this car you sold me can't climb a hill! You swore up and down it was a good car."

Salesman: "I didn't swear up and down. I said on the level it was a good car."

Taking No Chance

An officer of ancient Rome, called away to the wars, locked his beautiful wife in armor, gave the key to his best friend, with the admonition. "If I don't return in 6 months use this key. To you, my dear friend, I entrust it." He then galloped off to the wars. About 10 miles from home, he saw a cloud of dust approaching, and waited. His trusted friend, on horseback, galloped up and said, "You gave me the wrong key."

"Now can I quit? That engine stopped right out front!"

"A volunteer fireman—and I can't get you on a three-foot ladder to change a light bulb!"

False Alarm

Under its daily heading "Fire Calls" a California paper reported with a straight face recently:

"11:42 P.M.—Firemen and ambulance answered call to 400 block Old Coast Highway on report of woman about to have baby. Woman was 71 years of age. False alarm."—H. M. STANSIFER

Customer: "Remember that cheese you sold me yesterday?"

Grocer: "Yes."

Customer: "Did you say it was imported or deported from Switzerland?"

Too Toot

Wolf: Lets play pony-express, baby?

Gal: What's that, big boy?

Wolf: Post office, with a lot of horsing around.

A man stepped off a train and went up to a little boy standing on the platform.

"We've only got a short stop here," he said. "Here's a quarter. Go in that lunchroom and get me a sandwich will you? And here's another quarter. Get a sandwich for yourself, too."

The boy was gone so long the man began to get nervous. Just as the conductor hollered "All Aboard!" the kid dashed out of the lunchroom and ran over to the man.

"Here's your quarter," he said. "They only had one sandwich."

An informative discussion of dry chemical fire extinguishing agents with particular emphasis on factors responsible for quality and dependability.

. . . . by

Arthur B. Guise
Chief Engineer
Fire Extinguisher Division
ANSUL CHEMICAL COMPANY

— ANSUL DRY CHEMICAL — CONTROLLED QUALITY FOR CONSISTENT DEPENDABILITY

Your extinguishers can fail to operate when you need them most . . . or operate with less than maximum effectiveness and fail to extinguish the fire . . . unless properly maintained and charged with dependable first quality extinguishing agents.

This is equally true of dry chemical fire extinguishers.

Ansul *"PLUS-FIFTY"* Dry Chemical is produced under carefully controlled conditions to meet specific requirements. *This means that every container of Ansul Dry Chemical has the same uniform high quality.* Ansul Extinguishers are designed for use with Ansul Dry Chemical only and, if consistent high fire extinguishing effectiveness is to be obtained, Ansul Dry Chemical should be used for recharge purposes.

There are a number of factors influencing dry chemical quality and all must be controlled because variations in a dry chemical can affect its fire extinguishing effectiveness.

PARTICLE SIZE. The sodium bicarbonate in Ansul Dry Chemical must pass tests to insure that the size of the particles falls into a certain range. If a certain percentage of the particles are over a maximum given size, the fire extinguishing effectiveness of the dry chemical is measurably decreased. Ansul's quality control procedures insure that the fire extinguishing effectiveness is always high.

MOISTURE REPELLENCY. The materials and methods used to produce water repellency in the finished dry chemical directly affect its flow and packing characteristics and electrical resistivity. All dry chemicals will absorb moisture when exposed to highly humid atmospheres. Excessive moisture absorption causes caking of dry chemical and resultant failure of the extinguisher to operate. Ansul Extinguishers and shipping containers for dry chemical are weather-proofed to minimize the possibility of moisture absorption . . . and Ansul provides a further safeguard by furnishing a dry chemical which *can absorb four times more moisture than ordinary dry chemicals* without harmful effects to any of its characteristics.

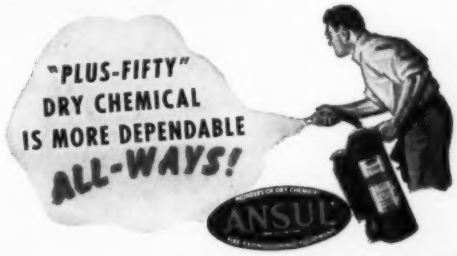
FLOW. Ansul Extinguishers are designed to discharge dry chemical at a definite rate. Quality control during the manufacturing operation insures that Ansul *"PLUS-FIFTY"* Dry Chemical will flow at a sufficiently high rate to insure maximum fire fighting effectiveness.

PACKING. *All* finely divided solids tend to pack. Dry chemical is no exception. Daily tests of Ansul *"PLUS-FIFTY"* Dry Chemical as it is produced insure that every batch will fluidize readily. Proper design of Ansul Extinguishers doubly insures fluidizing of dry chemical and proper, effective, discharge.

ELECTRICAL RESISTIVITY. Ansul *"PLUS-FIFTY"* Dry Chemical has an electrical resistivity of 1000 megohms. Frequent tests are made to insure that all Ansul Dry Chemical is equally resistive and always safe to use on electrical fires. Again, Ansul Dry Chemical can absorb four times more moisture than ordinary dry chemicals without impairing its electrical resistivity.

SUMMARY. Ansul's Engineering and Research Departments have developed specifications and tests to control particle size, moisture repellency, flow and packing characteristics. Last year 3500 flow tests were conducted on Ansul Dry Chemical to assure uniformly high quality of the manufactured product. You are assured of consistently high quality and maximum dependability with Ansul *"PLUS-FIFTY"* Dry Chemical.

Send for your copy of File No. 684 You will receive additional technical information on dry chemical. Also included is printed material describing Ansul's complete line of Dry Chemical Fire Extinguishing Equipment.



ANSUL
CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION
MARINETTE, WISCONSIN
DISTRIBUTORS IN ALL
PRINCIPAL CITIES IN THE U.S.A., CANADA AND OTHER COUNTRIES

THIS NAME ASSURES YOU OF QUALITY PRODUCTS

World Wide Fire News

By Roi B. Woolley

Factories Urged to Speed Security Measures

The next six months may be the most dangerous ever faced, declared Col. Lawrence Wilkinson, director of civil defense, New York State, addressing a conference of industrial representatives in New York on May 23. The meeting was held to discuss industrial plant protection in the event of anemy attack. "There is not much time and the responsibility for preparedness rests first with you," Col. Wilkinson told the delegates.

Samuel G. Hibben, director of applied lighting, Westinghouse Electric Corp., held that dimouts and blackouts in war might cripple transportation and that the probable employment of electrically guided missels or the use of ordinary navigational aides would make darkness of very little consequence (in misleading the enemy).

According to Lieut. Col. John F. Moran, the most dangerous saboteurs are those who serve the enemy unknowingly. One of these is the fanatic who usually suffers from some obscure mental disorder, because it is difficult to detect him until the damage is done. He suggested that plants check the loyalty of their employes, build morale, and have adequate guard forces to protect physical properties.

Edward J. Kehoe, regional chief of fire and accident branch of the Atomic Energy commission, said that damage by fire generally was as extensive as that caused by an atomic bomb explosion. He declared that insofar as industrial fire protection in an atomic attack went, municipal fire departments could not be counted upon in the event of attack. Conference members were urged to establish plant fire brigades and fire guards. "Water," Mr. Kehoe said, "is still the best known method of fighting fire. A plant should have available on its property or in the vicinity a sufficient quantity of water to handle the largest fire that can be anticipated without depending on water mains coming in from a distance," he maintained.

* * *

Six Suspicious Fires on Dutch Ship

The entire passenger list and crew of the 20,000-ton Dutch liner "Johan Van Olderbarnevelt" were not allowed to leave ship at Ijmuiden, the Netherlands, recently after six fires occurred aboard the vessels.

The first fire broke out while the ship was still in Amsterdam. Three more were discovered shortly after the ship left the port for Australia with about 1,500 immigrants. The captain brought the ship back to Ijmuiden for police investigation. Two more fires broke out on deck while the police were questioning passengers.

Police said they believed a single person was responsible for the fires, all of which were started in hidden corners or cupboards.

* * *

Accidental Air Raid Sirens Sound Off—Scare Many

New York City, which has been suffering from a bad attack of "siren-itis," had a relapse on May 4th, when three sirens sounded off accidentally in lower Manhattan on four occasions.

The result was about what might be expected in a city that has been so strict—if not somewhat onesided—as to rule out all forms of sirens on emergency vehicles, including fire.

The accidental sound-off accomplished one purpose, at least: it showed just about what some folks would be expected to do if a real alarm was sounded: i.e., grab the nearest phone and want to know what it is all about.

The sirens on top of the Municipal Building, and Engine Company 55 at 363 Broome Street, popped off simultaneously at 1:15 P.M. for a minute and a half. Fifteen minutes later the fire station siren went on the air again for about thirty seconds. The sound could be heard throughout the financial district and in the vicinity of Foley Square. Then came the avalanche of phone calls. Police Headquarters and newspaper offices were swamped with queries—and fire alarm headquarters came in for its share.

As operators tried to stem the flood of calls, investigators quickly traced the cause to workmen at the Elizabeth Street police station who had short-circuited some wires.

At 2:47 P.M. the siren atop Engine 31, at 87 Lafayette Street, acted up. The air was filled with shrieks for 40 seconds. Again the telephone calls—and the same explanation — short-circuiting of wires.

Thus far nobody has been found who sought any public shelters, or did very much of anything but grab a phone to call somebody for information.

FIRE SOLVOID WET

SO-1

Fastest! Lowest Cost!

PROVEN BY 500 FIRE DEPARTMENTS

KNOCKS OUT FIRES IN HALF THE TIME

CLASS-A FIRES
Surface: 1 gal. to 2000 gals. water.
Shallow: 1 gal. to 1000 gals. water.
Deep: 1 gal. to 400 gals. water.

CLASS-B FIRES
1 to 300 concentration; 3%-5% produces a stable foam using a foam play pipe.

MORE THAN DOUBLES SUPPRESSION VALUE OF WATER . . . COSTS 1/5¢ PER GAL. OF WATER TREATED FOR SURFACE FIRES

Proven effectiveness in amazingly low concentrations is why SOLVOID is the best of wetting agents. Using SOLVOID average fire outs require 75% less water and 50% less time; smoldering and rekindles are practically unknown. SOLVOID is non-toxic and non-corrosive and is harmless to tanks. SOLVOID's exclusive INJECT-TA-LINE Proportioner introduces 1/3% to 1/20% concentrations directly into 1" and 1½" hose lines; can be refilled under full pump pressure.

IMPACT FOAMING

Picture at right shows SOLVOID smothering a gasoline fire in 90 seconds using 1 to 300 concentration and a standard ⅜" solid stream nozzle.

PRICES f.o.b. San Francisco

$4.40 Per Gal. (in 5 gal. pail)
$4.25 Per Gal. (in 29 gal. drum)
$3.95 Per Gal. (in 53 gal. drum)

When ordering please furnish name of your preferred equipment dealer.

Send Coupon TODAY!

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Without obligation please furnish detailed information about SOLVOID as checked below.
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OUR EQUIPMENT DEALER IS:

Sweeney Report
3 year—390 FIRE TEST of SOLVOID

WELL WORTH CAREFUL STUDY . . . is the factual report of Fire Chief Sweeney of Antioch, Calif. Copies available on request.

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Distributed only through top-flight Fire Equipment Dealers

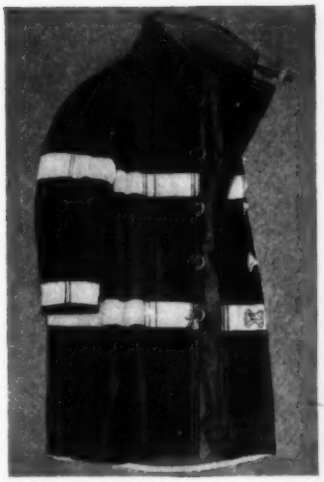
Friend of the Firefighter!

MIDWESTERN
PROTECTIVE CLOTHING

THE Original

Mackinaw Striped Safety Coat

Reduces Accidents — Saves Lives



Several years ago, Midwestern developed the *original* striped safety coat. The highly visible stripes are moulded to and vulcanized as part of the material. Thousands of Midwestern Safety Coats are serving fire departments throughout the world. Service records prove that these garments not only offer high safety visibility, but have the qualities required to withstand the rough usage required in your hazardous work of protecting life and property against fire.

All Midwestern Safety Coats have the moulded-in yellow stripes which are a part of the garment and not painted and sewed on. The *original* Midwestern Safety Coat will give you trouble-free protection and dependable service.

• PROTECTION
• COMFORT
• SERVICE

Largely through superior quality, design, fabric texture and advanced features, Midwestern is a leader in the field of firemen's clothing. All Midwestern specialized protective clothing have been developed from long years of experience . . . and each detail of design adds to the service, comfort, convenience and long wear of the garment.

Regardless of climate and performance demanded, you will find a fabric to exactly suit your needs in our vast selection of crude rubber and fabric materials. The softness and flexibility of the high-grade materials used is your assurance of long service and real protection. For full information on our complete line, see your Midwestern dealer. A letter to the factory will also bring you material samples for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN MFG. CO., Mackinaw, Illinois
Manufacturers of the Famous **MACKINAW Coats**

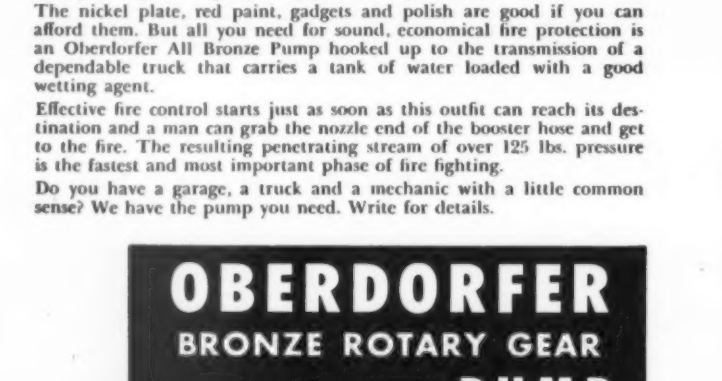
Build your own fire truck for a few hundred dollars

The time has come when rural fire protection should leave the "Fancy Dan" class so that every small community can do a real down-to-earth job of extinguishing fires rapidly, simply and inexpensively.

The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

Effective fire control starts just as soon as this outfit can reach its destination and a man can grab the nozzle end of the booster hose and get to the fire. The resulting penetrating stream of over 125 lbs. pressure is the fastest and most important phase of fire fighting.

Do you have a garage, a truck and a mechanic with a little common sense? We have the pump you need. Write for details.

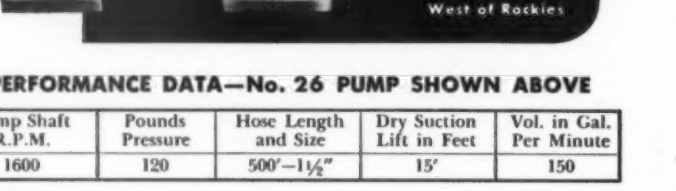


PERFORMANCE DATA—No. 26 PUMP SHOWN ABOVE

Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	15'	150

For complete specifications of this and other Oberdorfer All Bronze Booster Pumps, and name of your nearest distributor, write:

FIRE PUMP DIVISION OBERDORFER FOUNDRIES, INC., Syracuse, N.Y.



TRUMPET

UTILITY BAR

Utility bars are not all alike. Careful development in design has made the "Trumpet" outstanding for fire fighting, rescue, salvage work. Provides unusual leverage—gains entry where others won't. Does more jobs faster.

"Trumpet" utility bars are forged from Hi-carbon steel and flame hardened for unusual strength and durability. Now available for shipment out of stock. See your Wooster Brass representative or write direct.

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THE WOOSTER BRASS CO.
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MANUFACTURERS OF A COMPLETE LINE OF DISTINCTIVE FIRE FIGHTING EQUIPMENT

Among the Buffs

By Paul C. Ditzel*

Chicago, Ill.—Next to a good smoky basement job, there's nothing a good fire buff likes more than to swap lies with fellow sparks, fans, redhots, or whatever they are called in their own still alarm bailiwick.

I guess I outlied all my fellow fire fans here in Chicago, so I'm leading out a few lengths of column space to spread the gospel among bellringers 'round the country.

This editorial watch desk is wondering how come you got involved in this compulsion we call a hobby.

Me? Pappy Ditzel took me to a couple of lumber yard blazes in Buffalo when I was only a little shaver. From there we siamesed. He now goes to fourth alarms only. I take in the second alarms on up.

Buffing probably became an accepted outdoor sport during the past war (World War II in case you've lost track).

Remember when your face turned fire engine red when your next door neighbor wondered why the family flivver bolted from the garage at such early hours?

Then came the war. Like grass fires on an early spring day there were plenty of places for the bashful buff to make himself useful. Take buffers like Claude Weal and Freddy Zeller, both of Buffalo. They put in plenty of hours as auxiliary fire alarm operators.

During the present civil defense planning phase, buffs again are filling a definite need. Jack Corcoran, who works for the Eastern Inspection Bureau in Buffalo, is serving on the Erie County advisory board.

His close friend and radio-equipped fire buff extraordinary is Charlie Farnham. Charlie is an electrical engineering student at the University of Vermont in Burlington. But he still finds time to help Commissioner Harold R. Becker of the Buffalo fire department with radio problems. Charlie can talk a good fire. But he's an acknowledged past master at the intricacies of radio and electronics in the fire service.

Then there's W. E. "Bill" Webb of Wichita, Kansas. Bill began buffing during the war as an auxiliary fireman. He got so entangled in alarm tape and fire hose that he's been at it ever since. The "disease," as Mrs. Webb probably calls it, has communicated to daughter Delores Ann Webb. She's right in there behind Pa every time the Wichita alarm office bangs out a two-bagger.

Another Wichita buff has been answering alarms for 30 years. He is Earl McKee, who has an appropriate nickname: "Red." This red-headed plumber chucks his plunger for the brass nozzle every time there's a ripe one in Wichita.

They must know what they're doing, too. 'Cause District Fire Chief C. E. Holder proudly writes: "They're both good men and we like to have them around. They know their business."

That's real catnip for a buff.

Here in Chicago, Fire Fan Les Morris takes in most 2-11 alarms, and greater,

---

Paul C. Ditzel is connected with the Chicago Bureau of the Associated Press.

when he's not riding ambulances as part of his internship. Les is going to be a doctor. His pal, Hal Bruno, sports editor of the Dekalb (Ill.) Chronicle, takes time from box scores to take in box alarms of Chicago firemen when Hal comes to town. Hal also got started buffing when his Dad took him to fires before Hal heard of a baseball bat.

Brother Al. Winograd leads a normal life in Chicago's Board of Trade building. Let the fire sirens scream, however, and Al. is ready to abandon the confusion of the "wheat pit" for the organized confusion of a good working fire.

Time to "strike it out." I'd appreciate hearing from you buffs and bell clubbers. I'm gathering material for an article on fire buffs, and why they are fire buffs, for a national magazine. I'd be grateful for any information, fire bell club charters, newspapers, or anything giving information and anecdotes of you or your club's fire buffing. I'll also do my best to include mention of your outfit in a future column.

Dispatch all contributions to me at 859 Wellington Avenue, Chicago 14, Ill. And if you're ever in town and want to see how Mrs. O'Leary's boys fight 'em, phone me at Eastgate 7-5796.

Convention Dates

June 18-20—SOUTHEASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting. Norfolk, Va. Secretary-Treasurer, Chief E. F. Beville, Gainesville, Fla.

June 18-22—SOUTH DAKOTA FIRE SCHOOL. Annual meeting. Pierre, S. D. Associate Secretary, Chief R. W. Hanigan, Pierre, S. Dak.

June 18-22—FLORIDA STATE FIRE COLLEGE. Units 1 and 2 of the Advanced Course and Fire Service Practices, Ocala, Fla. For information contact W. H. Barnett, Box 372, Neptune Beach, Fla.

June 19-22—ILLINOIS FIRE COLLEGE. Annual meeting. University of Illinois. Champaign-Urbana, Ill. Secretary Illinois Firemen's Association, Chief Roy W. Alsip, Champaign, Ill.

June 19-22—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. Annual meeting. The Wentworth by-the-Sea, Portsmouth, N. H. Secretary-Treasurer, John W. O'Hearn, 22 Mt. Auburn Street, Watertown 72, Mass.

June 19-22—NEW ENGLAND DIVISION, INTERNATIONAL ASSCOCIATION OF FIRE CHIEFS. Joint meeting with New England Association of Fire Chiefs, The Wentworth by-the-Sea, Portsmouth, N. H. Secretary, Chief A. H. Koltonski, Rutland, Vt.

June 20—FIRE CHIEFS EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting. For information contact Chief John S. A. McAuliffe, Croton-on-Hudson. President.

June 20-22—MARYLAND STATE FIREMEN'S ASSOCIATION. Annual meeting. Cumberland, Md. Secretary B. R. Benson, 303 Bosley Avenue, Towson 4, Md.

June 20-24—BERKS COUNTY FIREMEN'S ASSOCIATION. Annual Fire Training School, Wyomissing, Pa. Secretary, Adam Ed. Baer, Jr., 213 S. 3rd Avenue, West Reading, Pa.

June 25-27—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual meeting. St. Louis, Mo. Secretary-Treasurer, Chief Ray Tiller, 319 East 5th Street, Waterloo, Ia.

June 25-29—FLORIDA STATE FIRE COLLEGE. Units 1 and 2 of the Advanced Course and Fire Service Practices, Ocala, Fla. For information contact W. H. Barnett, Box 372, Neptune Beach, Fla.

June 26-28—SASKATCHEWAN ASSOCIATION OF FIRE CHIEFS. Annual meeting. Prince Albert, Sask. Secretary, Chief William Winton, Estavan, Sask.

June 27—FIRE CHIEFS EMERGENCY PLAN OF FAIRFIELD COUNTY. Monthly meeting. For information contact George B. French, Trumbull, Conn., Secretary.

July 9-13—FLORIDA STATE FIRE COLLEGE. Units Nos. 1 and 2 of the Advanced Course, Ocala, Fla. For information contact W. H. Barnett, Box 372, Neptune Beach, Fla.

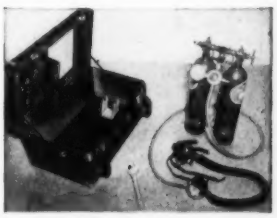
Protect Your Citizens with Better-Equipped Rescue Squads

Scott Demand Inhalator

THE new Scott *Demand* Inhalator provides efficient portable oxygen equipment for emergency use, *at low cost.* Offering "demand" flow of oxygen, plus constant flow if needed, the Scott *Demand* Inhalator can be used independently or as supplemental equipment in resuscitation, freeing resuscitators for use elsewhere.

The Scott *Demand* Inhalator is simply designed, easy to use. No adjustments of any kind are needed; department personnel does not require special training to use this new Scott product.

TYPE "A" Scott *Demand* Inhalator — portable, or for fixed installation in truck or ambulance (with or without cylinder)



TYPE "B" Scott *Demand* Inhalator including carrying case (with or without cylinders)

Here are the Outstanding Features of the New Scott DEMAND Inhalator.

SIMPLE. The Scott *Demand* Inhalator is easy to use — requires no special training. No adjustments are necessary — just a quarter turn of the cylinder valve and the Inhalator is ready to restore shock, immersion and heart-ailment victims.

EFFICIENT. With the Scott Inhalator oxygen is provided in ample quantity as "demanded" by the victim, conserving precious oxygen supplies. Constant flow also available when needed, "at the touch of a button."

LOW COST. In any one of several models the Scott *Demand* Inhalator is available at a cost well below that of other equipment of comparable scope. Investigate this new low-cost oxygen unit *now!*

Made by the manufacturers of famous Scott Air-Pak Safety Breathing Equipment.

Ask your distributor for FREE DEMONSTRATION or write us today!

ESTABLISHED IN 1932 Scott FOR SAFETY—FOR SERVICE

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CANADA: SAFETY SUPPLY CO. BRANCHES IN ALL PRINCIPAL CITIES
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SENSIBLE LUG COUPLINGS

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QUALITY *and* **SAFETY**

The improved Powhatan "Sensible-Lug Couplings" are precision tooled and manufactured of only the best high grade materials. They set a standard that is "tops" in this specialized field of fire-fighting equipment. The curved surfaces of this modern coupling enable the hose to glide easily over all obstructions, thus preventing snagging, an important safety and economical feature appreciated by those who know.

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POWHATAN BRASS and IRON WORKS

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FOR 30 YEARS — SINCE 1920 . . .

Hedberg Sirens Have Been Most Outstanding

Our Engine-Drive Siren has no equal and our 8" Electric Siren has a record of rolling over 9 minutes! They are worth bragging about!

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J. N. HEDBERG

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Convention Dates

JULY 18—FIRE CHIEFS EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting. For information contact Chief John S. A. McAuliffe, Croton-on-Hudson, N. Y., President.

July 19-21—"F" ASSOCIATION FOR FORMER U. S. NAVY, COAST GUARD AND MARINE CORPS FIRE FIGHTERS. Annual meeting, Buffalo, N. Y. Secretary-Treasurer, William J. Mignery, 728 W. Marion, Elkhart, Ind.

July 23-27—WEST VIRGINIA STATE FIRE SCHOOL. Annual meeting, Morgantown, W. Va. Director, R. E. Hanna, Jr., Fire Service Extension Schools, School of Mines, West Virginia University, Morgantown, W. Va.

July 24-25—WESTERN NEW YORK VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Mount Morris, N. Y. Secretary, James H. Surridge, Industry, N. Y.

Aug. 1—NEBRASKA STATE ASSOCIATION OF FIRE FIGHTERS. Annual meeting, Omaha, Neb. Secretary-Treasurer, Warren F. Kensinger, 307 South Pine, Grand Island, Neb.

Aug. 6-10—PENNSYLVANIA FIRE SCHOOL. Annual meeting, Lewistown, Pa. For further information write Fire School, Public Service Institute. Department of Public Instruction, Harrisburg, Pa.

Aug. 7-10 — PACIFIC COAST INTER-MOUNTAIN ASSOCIATION OF FIRE CHIEFS. Annual meeting, Portland, Ore. Secretary-Treasurer Jay W. Stevens, Merchants Exchange Building, San Francisco, Cal.

Aug. 9-10—INDIANA FIREMEN'S ASSOCIATION. Annual meeting, Gary, Ind. Secretary, Dee L. Corbin, P. O. Box 95, Bedford, Ind.

Aug. 14-17—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, Grand Rapids, Mich. Secretary-Treasurer, Chief Daniel B. Tierney, 8 Robbins Road, Arlington 74, Mass. General Manager, J. E. Jagger, 22 East 38th Street, New York 16, N. Y.

Aug. 14-17 — DELAWARE STATE FIRE SCHOOL. Annual meeting, Newark, Dela. For information contact Frank M. Forstburg, Conference Leader, Trainer in Trade and Industry, 511 West 8th Street, Wilmington 43, Dela.

Aug. 16-18—CONNECTICUT FIREMEN ASSOCIATION. Annual meeting, Stamford, Conn. Secretary-Treasurer, John J. Moehring, 51 Rutz Street, Stamford, Conn.

Aug. 20-23 — DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, London, Ont. Secretary-Treasurer, Chief Allan H. Clark, Fire Headquarters, Lakefield, Ont.

Sept. 4-7—MARYLAND SHORT COURSE. Annual meeting, University of Maryland, College Park, Md. Director, Chief James W. Just, Fire Service Extension, University of Maryland, College Park, Md.

Sept. 5-8—MONTANA STATE FIRE SCHOOL. Annual meeting Polson, Mont. For information, contact Polson Fire Department.

Sept. 10-14—VIRGINIA STATE FIRE SCHOOL. Annual meeting, No. 9 Station, 115 Thole Street, Norfolk, Va. Director, Fire Marshal Clay A. Easterly, Box 112, Martinsville, Va.

Sept 17—FIRE CHIEFS EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting. For information, contact Chief John S. A. McAuliffe, Croton-on-Hudson, N. Y.,

Sept. 17-20 — INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Mark Hopkins Hotel, San Francisco, Cal. Secretary, Irvin Shulsinger, 11 West 42nd Street, New York 18, N. Y.

Sept. 28-29—INTERNATIONAL RESCUE AND FIRST AID ASSOCIATION. Annual meeting, Roanoke, Va. President, Julian S. Wise, Box 441, Roanoke, Va.

Sprinklers Came Too Late

There was an ironic twist of fate in the destruction of the building housing the Kempker Furniture Manufacturing Co., in St. Petersburg, Fla., on April 15th last, with property loss of $75,000.

The fire occurred one day before a sprinkler system was to have been installed by the company.

The fire, of unknown origin, was discovered about 2.30 P.M. Firemen under Chief C. W. Nesbit and Assistant Chief Griffith confined the fast spreading blaze to the one building, using five pumpers and 85 lengths of hose.

I. A. F. C. Conference Exhibitors Sign Up

Chief L. C. Canning, Midvale, Utah, Chairman of the Committee on exhibits for the Grand Rapids, Mich., Conference of the International Association of Fire Chiefs, to be held on August 14-17, inclusive, reports good headway in signing up exhibitors for the conference. As of May 16, the following companies have reserved exhibit space.

American Marsh Pumps, Inc.
The Circul-Air Corporation
E & J Manufacturing Company
Calgon, Inc.
The American City
Stephenson Corporation
D. B. Smith & Company
Akron Brass Manufacturing Company, Inc.
Fabric Fire Hose Company
American District Telegraph Company
Atlas Safety Equipment Company, Inc.
Mine Safety Appliances Company
Cardox Corporation
Seagrave Corporation
The Four Wheel Drive Auto Company
Metcalf Brothers & Company
Eureka Fire Hose Division of U. S. Rubber Company
Food Machinery Corporation (John Bean Division)
Motorola, Inc.
Safety First Products Corporation
Homelite Corporation
Rockwood Sprinkler Company
American Fire Apparatus Company
Scott Aviation Corporation
Bi-Lateral Fire Hose Company
Viking Sprinkler Company
FIRE ENGINEERING

Manufacturers interested in displaying their products at the Grand Rapids Conference should contact Chief L. C. Canning, 285 East 2nd Avenue, Midvale, Utah.

Alert Hose Co. 75 Years Young

The Alert Hose Company of Adams, Mass., celebrated its 75th Anniversary on May 20, 1951, the occasion being marked by a dinner attended by over 200 members, their wives, and friends. Charles H. Armstrong, foreman of the company, led the speakers, then turning the meeting over to Charles F. Reid, third assistant engineer of the Adams Fire District, as master of ceremonies. Rev. Nelson W. Bryant, rector of St. Marks Episcopal Church, delivered the principal address of the evening.

Other speakers included Fire Chief Arthur H. Hathoway, Jr., of Adams; Chief Thomas Burke and Deputy Chief Ward Whalen of Pittsfield; Chief Arthur Girard of North Adams; Chief Charles Jepson of Cheshire; Chief Norman Howe of Dalton, and Foreman John Mulvaney of Clarksburg. Also Chairman Morton Burdick of Adams, Selectman; Chairman Edward H. Arnold of the Prudential Committee of the Fire District; State Senator Silvio O. Conte of Pittsfield, and Rep. Richard A. Ruether of Williamstown. Musical entertainment followed the speaking program.

John Eichorn, secretary-treasurer of the Alerts for the past 24 years, recited the history of the Company from its organization meeting in the Greylock Hotel on May 20, 1876. The first equipment consisted of three hand-drawn hose carts. The first ladder truck was obtained in 1882—also hand drawn. The first alarm box was installed in 1893 and the first piece of motorized equipment arrived in 1917.

New, Fast, Positive Fire Killer...

DRY CHEMICAL C-O-TWO

WHEELED PORTABLE FIRE EXTINGUISHER

Experienced engineering develops new, highly efficient 150-pound capacity dry chemical type wheeled portable fire extinguisher . . . has exclusive design that assures you of lasting, foolproof fire protection.

This new fire killer is easy to operate, compact, well-balanced and offers extensive maneuverability indoors or outdoors. Does a highly effective job on flammable liquid, gas and electrical fires, as well as surface fires involving ordinary combustible materials . . . granted unconditional B, C rating by the Underwriters' Laboratories, Inc.

Exclusive design renders constant free-flowing dry chemical . . . fire extinguisher is partially inverted for wheeling, then fully inverted at fire scene, which changes the position of the dry chemical in the tank and thereby provides mechanical breakage. This outstanding mechanical breakage feature, plus a continuous nitrogen pressured agitation or fluffing, together with a skillfully blended free-flowing dry chemical, guarantees a faster, more effective and complete discharge.

Rechargeable on-the-scene . . . no special tools needed . . . C-O-TWO Dry Chemical for recharging packaged in handy 50-pound size, moisture-proof containers . . . spare nitrogen pressure cylinders readily available.

Act now for complete free information on this newest contribution to modern fire fighting. Remember . . . you can't put fire off . . . fire doesn't wait. Get the facts today!

C-O-TWO FIRE EQUIPMENT COMPANY
NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada
Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
Built-In Smoke and Heat Fire Detecting Systems

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ACME

the Only Gas Mask with the "PICTURE WINDOWS"

You never have that "jammed-in" feeling, wearing the Acme Full-Vision Gas Mask. Its patented, larger lenses are like picture windows, giving you full natural vision for that safe, unconfined feeling. When you walk, you can actually see your toes without bobbing your head. This factor alone makes Acme outstanding among gas masks . . . well worth looking into.

Write for complete story on Acme Gas Masks for all fire-fighting hazards.

ACME PROTECTION EQUIPMENT COMPANY
3037 WEST LAKE STREET
CHICAGO 12, ILLINOIS

The ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

CONNECTING PRIVATE FIRE ALARMS TO MUNICIPAL SERVICE

THE discussion in this Round Table is a continuation of that which appeared in the May issue of FIRE ENGINEERING on private fire alarms.

The generous response from our readers made it necessary to carry the discussion over to this issue and to the July issue as well.

Readers are invited to send in their comments on this subject which is described in the box below, to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Question

H. D. Demonbreun, Chief, Nashville, Tenn.: We require private establishments to furnish a master box, all ducting and cable from building to pedestal. They must maintain duct and cable, but city maintains the box.

We recommend this type of connecting private establishments to municipal alarm systems, but suffer quite a number of false alarms due to high and low surges of water pressure and other causes.

The Federal and State Governments are each building new buildings here. They insist on having alarm boxes inside buildings and connected directly with our alarm system. Of course, this is against all fire alarm ethics, as any trouble inside a building can cause a whole circuit to go open. We are absolutely against this method, but must comply.

HERE IS THE TOPIC

1. **Where a private establishment wishes to install a fire alarm box (which they have purchased) and connect to the municipal fire alarm system, with what rules must they comply?**
2. **What charge, if any, is made for connecting such fire alarm boxes to the municipal fire alarm system?**
3. **Is there an annual charge for maintenance of such box? If so, how much?**

C. B. Boyd, Superintendent, Fire Alarm System, Birmingham, Ala.: We permit the connection of a Class (A) Master Fire Alarm Box with Shunt Loop. The owner of the private box is required to comply with the latest edition of the NBFU Pamphlet Number 73 Operating Standard For Installation Maintenance and use of Municipal Fire Alarm System as recommended by the National Fire Protection Association. The box is subject to inspection and approval by the Chief of Fire Department or his official representative.

There is no charge made for the connection of the box to the municipal circuit.

There is no charge made for the annual maintenance of the box. However, the Fire Department box inspector does make an inspection of the private box and the Chief or his representative requests that the private box owner make the necessary repairs at his expense.

James T. Blamey, Chief, Spokane, Wash.: We would insist that the box must be located so that the municipal fire alarm crew could maintain and have access to it at all times.

Where the box is located reasonably close to existing fire alarm box circuits, there would be no connecting charge.

There would be no maintenance charge due to the fact that the addition of a box under these circumstances would increase the over-all coverage of the alarm system and benefit the community. For this reason then the maintenance of this box should be a municipal obligation.

D. Clawson, Chief, Winnipeg, Man.: A private establishment must submit plans of their location. The installation is done by the City at the private establishment's expense.

The charge to connect to the City system is the actual cost.

There is an annual maintenance charge of $75.00, and this includes a test on the system at least twice a month. A charge of $5.00 per year is made for testing each auxiliary box.

John C. Klinck, Chief, Memphis, Tenn.: Here in Memphis we require a private establishment to furnish wire from the box to the nearest fire alarm box circuit.

No charge is made, as we are mutually aided by each box added. We maintain up to the box and from the box on into the building becomes their responsibility.

Milton C. Andrews, Chief, New Bedford, Mass.: Installation of these boxes shall comply with the Standards of

the National Board of Fire Underwriters governing Municipal Fire Alarm Systems, Pamphlet No. 73; also, the rules of the National Electric Code, and any local electric ordinances. Work must meet with approval of local Wire Department and fire department boxes installed on private property are arranged as to be accessible to the fire department at all times. Installation provides for means to control the box so that it will not interfere with the operation of the street box circuit should any trouble arise on the auxiliary side of the circuit.

On aerial installations to point of building entrance, the Fire Department takes care of the service without charge. On underground cable installations, the business concern would assume all costs of cable and labor from building entrance point to nearest terminal point. Cost of all electric work inside of building in connection with box installation to outside entrance point, shall be assumed by owner. Nearly all inside electric work is done by private contractors, subject to Wire Department and Fire Department inspection and approval.

There is no annual charge or otherwise for maintenance of such box.

Walter H. Kammann, Chief, St. Louis, Mo.: It has not been the policy of our City to extend its fire alarm system into any building on private property. We try to follow the National Board of Fire Underwriters' pamphlet No. 73 and article 207-12 prohibiting the placing of boxes inside buildings and connecting same to fire alarm box circuits containing street boxes. In a few cases in an industry or institution where the distance to a fire alarm box on a public street is too great, we may place an alarm box in front of their entrance. In this case we have to have an ordinance passed and approved before the installation.

Any work done in connection with the relocation or extension of circuits of Municiple Fire Alarm System are charged for on the basis of time and material used.

There is an annual charge of $5.00 for any Box on private property.

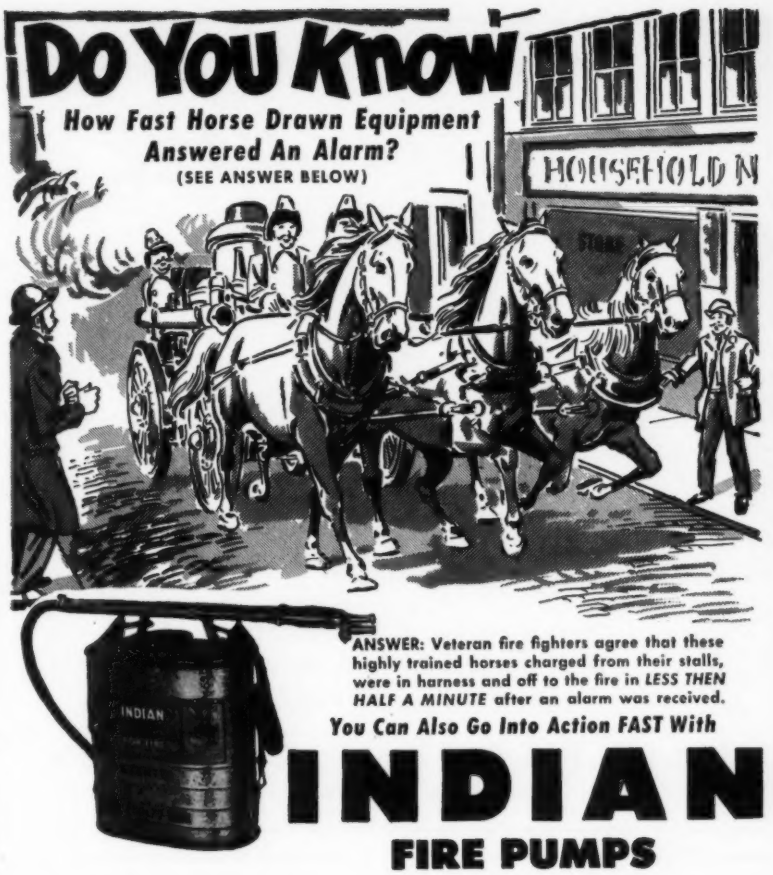
Allie A. Feldman, Chief, Denver, Colo.: When a private establishment wishes to install a fire alarm box (which they purchase) and connect to the municipal fire alarm system, it has always been our policy, especially on a corner building to install the box on the corner outside the building thus serving two purposes, one for the public and the other for the establishment.

There is no charge normally, although should the particular location necessitate extra material the charge is made only for the material.

There is no charge for the maintenance of such a box.

F. E. Wood, Chief, Wichita, Kans.: We have master and auxiliary fire alarm boxes located in two private business places. These installations were completed several years ago. The master box and auxiliary are inside the building where they can not be used by the public.

The National Board of Fire Underwriters' new rule 207-12 states—"Boxes on circuits with street boxes



ANSWER: Veteran fire fighters agree that these highly trained horses charged from their stalls, were in harness and off to the fire in *LESS THEN HALF A MINUTE* after an alarm was received.

You Can Also Go Into Action FAST With

INDIAN FIRE PUMPS

Modern, up-to-date fire truck with **INDIAN FIRE PUMPS** mounted in place.

Photo courtesy H & H Truck Tank Co., Jersey City, New Jersey

Today's fire departments, foresters, lumbermen, campers and private citizens find **INDIAN FIRE PUMPS** the answer to their need for speedy fire fighting.

A man with one of these famous backpack extinguishers won't lose a minute attacking fires on roofs, in fields, brush, in buildings, rooms or rubbish. When seconds count—use **INDIANS.**

INDIAN FIRE PUMPS are ideally suited for Civil Defense work. Send for catalog.

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PACIFIC COAST BRANCHES:

Hercules Equipment & Rubber Company, Inc. 435 Brannan Street San Francisco 7, California

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For Dependability Plus Efficiency

Specify HALE

HALE FIRE PUMPS are built in all STANDARD CAPACITIES

Write today for NEW BULLETIN #312 on Principles of 3-Stage Operation and other New Bulletins on Hale Fire Pumps

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

THE MYSTERY LINE

Plate J-200
Solid Fog—Solid Stream—Shut Off. Plus complete water control in each size.

Plate L-200
SIZES
1"—1½"—2½"
2½" Jumbo

Plate S-200

ELKHART BRASS MFG. CO., INC.
ELKHART INDIANA

shall not be placed inside buildings."

We have not charged anything for connecting boxes. All material and labor for installation was furnished by the business firm. Supervision of installation and connecting was done by the Fire Department.

There is no charge for maintenance of boxes.

L. E. Woldit, City Electrician, Sacramento, Cal.: Private establishments will be permitted to connect to City of Sacramento Fire Alarm System, only when they have established an approved private fire alarm system of their own. The firm and establishment must be large enough to warrant such a system. No single alarm box will be installed in any establishment with direct connection to our alarm system.

Owner must purchase a Gamewell Master Fire Alarm Box, install same at a street intersection and location specified by the City Electrician. Installation must be complete except actual line connection which will be done by city crews.

Alarm signals through this master alarm box are either manual by an individual on the street or actuated by the owners private system. Installation and equipment must comply with rules and regulations of the National Board of Fire Underwriters and International Municipal Signal Association.

No charge will be made for Fire alarm connection.

No annual charge is made for fire alarm maintenance by the City of Sacramento. but owner must maintain his own private system with the least possible false alarm or trouble calls going out over the city fire alarm system.

A. G. Maurer, City Electrician, Canton, Ohio: All major industries in this city have one or more boxes connected to the city's fire alarm system. It is customary for them to pay all cost therewith. We require one box to be accessible to the public for the benefit of surrounding territory. This affords means for summoning Fire Department at night, Sundays and Holidays etc. when plants may be closed.

There is no charge for connecting such fire alarm boxes to the municipal alarm system. All that is required is the initial cost.

There is as before stated no service or maintenance charge of any kind whatsoever. We feel that this arrangement helps to keep down the fire loss which is our main objective.

L. P. Scully, Chief, Erie, Pa.: All fire alarm boxes are on the outside of buildings, or on the nearest utility pole to the building.

Any private establishment may purchase a fire alarm box, which conforms with our present fire alarm system and must be installed as noted above. An auxiliary system may be placed in a private establishment and must be connected to an outside box under the supervision of the City Electrician. Private concerns doing such work provide their own labor and material.

The auxiliary system is maintained at the expense of the private establishment.

The master (outside) box becomes the property of the City of Erie and is maintained by the City.

A monthly check is made on the

auxiliary systems by the City of Erie Electrical Department.

George T. Morgan, Chief, Wilmington, Dela.: In Wilmington where private establishments wish to install fire alarm boxes, the box is purchased by the City of Wilmington and the establishment is billed for the cost of the box plus wiring used. No one is permitted to connect to or add to the alarm system except our line division.

No charge is made for connecting such fire alarm boxes except for the amount of wire used.

There is no annual charge for maintenance.

C. M. Johnson, Chief, Knoxville, Tenn.: In the past we have had several fire alarm boxes installed in buildings (private places of business). These boxes were owned and installed by the City without charge.

This practice has been discontinued. In the event a company wishes a fire alarm box, we suggest that they contact the A D T and work out a fire alarm system with them. This of course, comes directly into the fire alarm room, but, does not tie in with the municipal system.

We feel that the installation of boxes by the city because of original cost and maintenance is not satisfactory; and if the cost was borne by the company, there would still be the possibility of a fire in the building destroying the box and disrupting the entire fire alarm system.

C. G. Burnett, Chief, Ottawa, Ont.: In reply to your problem, our fire alarm requires that all fire alarm boxes installed in private establishments must comply with the Fire Underwriter's standards of installation.

The municipal charge depends on the material used for connecting the fire alarm boxes in our circuits.

There is no charge and our fire alarm staff has a monthly inspection and test of these boxes as we are always glad to have private establishments connected into our fire alarm system as it adds an additional protection.

Michael H. Lotz, Chief Engineer, Baltimore, Md.: Estimates are submitted upon request as to the cost of installation of fire alarm boxes on private property. The boxes are installed at their expense, with the understanding that absolutely no auxiliary attachments or appliances of any type will be permitted to be attached thereto, and that the installation is accessible to representatives of the Fire Department at any and all times. The right is reserved to discontinue for tampering or interference with the service.

Fire alarm boxes other than provided by the department are not permissible.

No annual charge is made for maintenance, except damage due to conditions beyond our control.

Paul P. Heinz, Chief, New Haven, Conn.: Installation of a private alarm box in New Haven, requires approval of the Board of Fire Commissioners, who accept the recommendation of the Chief. This depends upon local conditions and ordinarily there must be an indication that such a box would enhance the possibility of earlier transmission of an alarm than would otherwise be likely. We in New Haven believe that an automatic detection system connected to a private

Insert Shows Floodlight Elevator in Raised Operating Position

EMERGENCY FLOODLIGHT TRUCKS

DeLuxe CUSTOM BUILT EQUIPMENT with or without the FLOODLIGHTING FEATURE, All Steel Enclosed

THREE - MODELS

THE SENIOR (3 ton Chassis, 175" Wheel Base)

THE STANDARD (2 ton Chassis, 158" Wheel base)

THE NEW X-L ECONOMY UNIT (1½ ton Chassis, 158" Wheel Base

All Models carry complete First Aid and Salvage Equipment as required by the customer.

The SENIOR MODEL—most suitable for cities, is equipped with exterior and interior compartments and seats for the crew. Five built for the City of New York; one with portable floodlighting equipment and four with 10KW power take off driven generator and elevator controlled floodlights. Three built for the City of Philadelphia, with 10KW elevator controlled floodlights.

The STANDARD MODEL—for the average Fire Department, with or without elevator floodlights, equipped with exterior compartments, and the interior equipped with mounted stretchers and seats for the crew. This model in service in many Fire Departments for over 10 years.

The NEW X-L MODEL—provides maximum facilities at minimum cost.

Write for detailed construction and electrical specifications, photographs and prices and state your requirements.

AFE APPROVED FIRE EQUIPMENT CO.
ROCKVILLE CENTRE • NEW YORK

BAR-WAY HOSE COUPLINGS
FOR BOOSTER and HIGH PRESSURE FOG LINES

REMOUNTABLE — without the purchase of additional parts; use over and over again

FULL FLOW — no suppression of flow in coupling

HIGH PRESSURE — tested to 3000 lb., 500 lb. pull

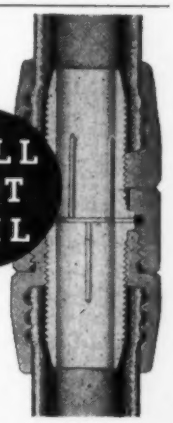
INTERNAL EXPANSION — no shrinkage of hose at coupling

STREAMLINED — free from objectionable projections

ACCURATELY MACHINED — always the same . . . interchangeable

For maximum efficiency, economy and protection in ¾" and 1" sizes, specify Bar-Way couplings attached to hose of proper size.

WILL NOT FAIL



BAR-WAY MFG. CO.
STAMFORD, CONN.
West Coast Representative
W. D. Rigdon
383 Brannan St., San Francisco 7

DEALERS! Make Over 100% Profit Selling New Low Priced *Automatic* Home Fire Alarm System

FIRE-LITE

HOME FIRE ALARM SYSTEM with U.L. APPROVED Rate-of-Rise Detectors

Every Homeowner is a Prospect!

Show folks a low cost way to safeguard lives and property with FIRE-LITE and you'll make big profits! FIRE-LITE automatically and instantly detects fires, sounds a shrill, loud alarm, arouses family before fire gains headway.

We supply you with a demonstrator alarm, tested sales plan and an illustrated book that clinches sales for you! Every man wants to protect the lives of his family and his home. You can easily sell that man a low cost FIRE-LITE Home Alarm.

FIREMEN!

Make extra money in spare time selling FIRE-LITE Home Alarm Systems.

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Write Today

for a Dealership, Complete Information and Prices.

FIRE-LITE ALARMS • 174 Shelton Ave., New Haven, Conn.

Member National Fire Protection Association

Picture of truck facing front with canopy out.

•

Picture of truck facing rear with canopy in.

BRUCO

BRUMBAUGH BODY COMPANY ALTOONA PENNA.

Bruco semi-enclosed squad and emergency truck with all steel sliding canopy to give you all weather protection. Canopy can be mechanically operated as well as manually. All compartments and appointments to your specifications. Portable equipment mounted on handy slide-out racks. Furnished with or without pump and tank. Write today for information on Squad Trucks, Emergency Trucks, or pumpers.

BRUMBAUGH BODY CO., 100 W. Plank Rd., Altoona, Penn.

alarm box is a valuable aid in quick detection of fires and early notification to the Fire Department.

No charge is made for connecting private boxes to the municipal system, but the box must be furnished by the person making application.

The City does not assume responsibility for maintenance of private boxes. Periodical tests are made without charge, in conjunction with routine tests of street boxes.

It is my personal opinion, based upon actual experience over the past five years, that any approved supervised automatic detection system connected to Fire Headquarters through a master fire box or by leased communication circuits, plus automatic sprinklers, will keep fire losses at a reasonable level. We can point to an instance in our City, where a detection system picked up a fire in a sprinkler protected building and the Department responded and extinguished the blaze before the sprinklers, thus preventing serious water damage.

R. L. Woolard, Chief, Norfolk, Va.: Where a private establishment wishes to install fire alarm box which they have purchased and connect to the Municipal fire alarm system, the local contractor is required to contact the Bureau of Electrical Affairs for locations of fire alarm box circuit. Wires are then stretched from box circuit on street to building. Installation of box inside of building is made by Bureau of Electrical Affairs. Location of fire alarm box in building is selected by the Chief in charge of Bureau Fire Prevention. All work regarding the installation is supervised by Bureau of Electrical Affairs.

No charge is made for connecting such fire alarm boxes to the Municipal Fire Alarm System.

There is no annual charge for maintenance of such box.

Elmer M. Cain, Chief, Cleveland, Ohio: Where a private establishment wishes to install a fire alarm box (which they have purchased) and connect to the municipal fire alarm system, they must comply with the standards of the National Board of Fire Underwriters Pamphlet No. 73, the electrical code of the City of Cleveland and with the rules of the Fire Alarm Signal System.

There is no charge made for connecting such fire alarm boxes to the municipal fire alarm system.

There is no annual charge made for the maintenance of such boxes, except that the cost of any repair parts needed shall be borne by the private establishment concerned.

We believe that, where practicable, these private boxes should be installed so as to be accessible to the general public.

Forrest B. Lucas, Chief, Dayton, Ohio: When a private establishment wishes to install a privately owned fire alarm box and connect it to a city fire circuit, a written request must be made to the Superintendent of the Bureau of Telegraphs & Signals. It is through his office that authorization for the purchase of the box is given. They must state their reasons as to the need of the box; the approximate area involved; and where they prefer installation. After a survey has been made by the Bureau of Telegraphs & Signals and approval has been given,

only then can the box be installed; and then with understanding that the installation of the box will be made under the complete supervision of the Superintendent of Telegraphs & Signals.

The mounting of the box, the connecting of the box to the City Fire Alarm circuit, and to the box proper is made by Telegraph & Signal Electricians. There are no charges for these services.

The City is glad to cooperate with the establishments who do purchase their own boxes. By the installing of these private boxes a speedier response is assured.

Blackhawk Fire Fighters Association Meets

The annual meeting of the Blackhawk Fire Fighters Association was held at Polo, Ill., as customary for the past decade. That community was the birthplace of the organization, which comprises counties of Lee, Carroll, Whiteside, Ogle, Bureau, Stephenson and Winnebago in western Illinois. The Association members include paid, part paid and volunteer departments, together with a number of industrial fire brigades.

Since its founding, the Association has attracted wide acclaim, its meetings being attended not only by fire chiefs and firemen, but mayors and other civic officials, as well as plant and safety men. Heavy emphasis has been placed during recent months upon development of mutual aid, including such details as preparing inventories of apparatus and equipment, communications and training.

Officers elected at the Polo annual gathering were: President, Joak Hoak, Lenark, Ill.; Vice-President, Robert Woker, Pearl City, Ill.; Secretary, Loren Crawford, Milledgeville, Ill., and Treasurer, Russell Brooks, Prophetstown, Ill. Charles Van-Gilder, the retiring president, was installing officer.

The featured speaker at the meeting was Dr. Frank Beach, Professor, University of Illinois, whose topic was "Six Basic Ideas for Playing the Game as Fireman." Special guests at the meeting included Paul Godesiabois, President, Illinois Firemen's Association; G. A. Witzke, Deputy State Fire Marshal from Chicago; Edgar High, Deputy State Fire Marshall from Rockford, Ill., and L. H. Glens, Executive Director, Illinois Association of Fire Districts, from Springfield.

EDW. M. RHOADES

April Fire Losses

Fire losses in the United States during April was estimated at $62,965,000, it was announced by Lewis A. Vincent, general manager of the National Board of Fire Underwriters.

This is an increase of 2.2 per cent over losses of $61,605,000 recorded for April 1950, but a decrease of 11.9 per cent from losses of $71,507,000 reported for March 1951.

Losses for the first four months of 1951 now total $272,294,000, an increase of 8.3 per cent over losses of $251,236,000 for the first four months of 1950.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

Give Fires the Gate - single and double!

No. 924
Hydrant Gate Valve

No. 925
Siamese with Gates

No. 924 has all brass construction. The single wedge disc resists the strain of quick opening and closing. Packing area is unusually large.

No. 925 is a sturdy piece of equipment, practical for every department. The Siamese section is made of brass and especially strong to carry the two Single Hydrant Gates.

Your request brings you full details on all Buckeye Fire Department Accessories.

Buckeye
FIRE DEPARTMENT ACCESSORIES

BUCKEYE IRON & BRASS WORKS, DEPARTMENT E
DAYTON 1, OHIO

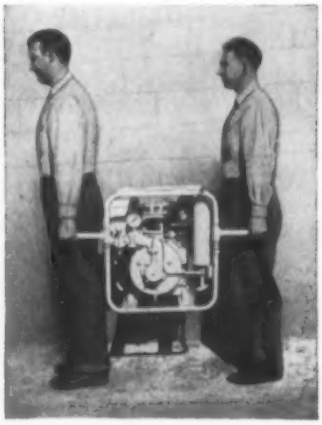
Another
BOYER!
CUSTOM BUILT
apparatus recently delivered to Torrington, Wyo.

BOYER FIRE APPARATUS CO.
LOGANSPORT, IND.
ESTABLISHED OVER 70 YEARS

HALE Type FZZ

Fine for Re-laying to Major Pumper . . .

Easily Carried by 2 Men



Chief Leon Arnold of Newellton, La., writes . . .

We have received from you your portable Pump, Type FZZ, which we are thoroughly satisfied with. We have only had to use it once since our purchase in September of last year, but it did a big pump job for 1½ hours through a 300-ft. line of 2½-inch hose branching off in a "Y" to two 1½-inch lines, 150 ft. each.

We carry this unit on our 500-gallon pumper to use in places where we cannot get near enough to water. Two men can easily carry it any place.

We recommend the Hale FZZ Portable Pump for any Fire Department.

The Hale Type FZZ portable fire pumping unit pictured at top can be easily carried by two men to source of water which truck cannot reach, for refilling booster tank or for fighting fire direct. Unit is also available mounted on two truck-type wheels or on rubber-cushioned steel channels.

The unit can be mounted on virtually any apparatus, making it possible to fight fire while apparatus is in motion, using booster tank for source of water.

Capacity of FZZ is 60 G.P.M. at 90 lbs. pressure; 150 G.P.M. at 30 lbs. pressure. Provides two capable fire streams through 1½-inch hose lines, using ⅝-inch nozzles. **Note:** Discharge Adapter can be supplied for use with 2½-inch hose.

Ask for demonstration; no Obligation.

Write today for FZZ Folder to:

HALE FIRE PUMP COMPANY

CONSHOHOCKEN, PA.

Fire Pumps in All Standard Capacities

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Scrap Drive Almost Starts Scrap

In West Long Branch, N. J., the volunteers of Fire Company No. 2, like many of their ilk, conducted a scrap drive to raise funds for the renovation of their fire house. A certain Sunday was set for the date, and all the home folks were urged to have their scrap out at the curb to facilitate the 'pick-up'. The folks did just that, but the pick-up was a horse of another garage.

One Raymond Halter of Old Deal Road, Eatontown, had not been informed of the salvage drive. Mr. Halter, it seems, is in the collection business himself. And so, coming forth on this particular Sabbath morning his eyes bulged out at the array of odds and ends all piled along the curbs. Juicy pickings indeed, sez he.

The temptations were too great for Mr. Halter. He nonchalantly proceeded to collect the scrap and headed for points south. But it wasn't long before the vamps were after him, and his load!

Members of the fire company searched the highways and byways of the entire Borough before they caught up with Mr. Halter and his full load. Quite surprised indeed was the "collector" when informed that he'd walked off with the proceeds of the vamps' drive. But he turned his collection over to the proper collectors, not without some reluctance!

* * *

Belleville Braves Go Aquatic

Repercussions from the horrendous hurricane of last November are filtering in. The latest comes from Chief William (Bill) Dunleavy of the Belleville, N. J., Fire Department.

Flood water, seeping into lime and caustic soda stored in one of the buildings on the premises occupied by the New York Color and Dye Company, Main Street, Belleville, generated sufficient heat to start the paper bag containers burning.

The flames reached high enough to scorch the ceiling and walls of the wooden building, igniting the door frame and ceiling frame.

The Belleville Brothers, faced with the problem of getting near enough to the building, entirely marooned by the high waters of the Passaic River, had their work cut out for them. Unfortunately, Chief Dunleavy's department lacks a fireboat. There was only one thing to do—wade in.

Fire fighters, standing waist deep in the muddy, swirling, water, brought streams to play upon the inside walls and roof of the structure, preventing extension of the fire until the lime had burned itself out.

* * *

Open Dat Door Richard!!

The small Montgomery County, Pa., community of Trappe has a very modern fire station that was the idol of the firemen's hearts. It even had electrically-controlled doors.

Not so long ago a fire was discovered in the fire station. The vamps went into action! Nearly a score of them tried in vain to open the firehouse doors. Alas, they could be raised only a few feet from the floor, so the press story relates.

Seems the flames had disabled the controls. And so the volunteers stood helpless while their ambulance was destroyed and a fire truck damaged.

Firemen from four nearby communities managed to save the building, confining the blaze to the ground floor of the two-story structure.

* * *

Fire Hero Turns Out to Be AWOL Soldier

Early in May, Pvt. Ray Villalpando, 21, of the air force at Turner air force base, in Albany, Ga., was married. Prior to that he was reported AWOL by officials at the base, who declined to relate his absence with courtship or mariage.

On May 14 Pvt. Villalpando reported, with a vengeance, but for a different kind of duty. Late that night he dashed into a blazing Atlanta home to save the lives of Mr. and Mrs. George Bohler.

On the first trip he led Bohler, 40, to safety. He ran back into the house and found Mrs. Bohler on the floor. He carried her out. Then he went back to rescue Bohler for the second time. Bohler had dashed back into the house. After that, Pvt. Villalpando made a fourth trip under the misapprehension that there was a child in the house.

The report states the soldier is recovering from burns received in the rescue, but fails to disclose the decision of the air force "brass" on the "AWOL" charges.

* * *

Fire Goes a Kite-ing

In Texarkana, Tex., a certain Mr. McGee was flying a kite for his small son. The kite string snagged across a high tension line. Things happened—instantly!

The line sizzled, flamed and dropped to earth, felling several service lines en route. Lights in thousands of homes and businesses went out. Housewives were startled as fuses popped like firecrackers. Phone calls flooded fire and police headquarters. Fences entangled with the hot wires took off in a blaze. Two radio stations abruptly left the air—no power. Grass fires sprouted and spread.

Firemen and police found that the kite string was Christmas cord with tinsel woven into it, which shorted the high tension line. Papa McGee won't go fly a kite again for some time to come!

* * *

Hot Off the Tape

According to Science News Letter, April 21, 1951, "fire alarm device for beds, to awaken a sleeper and the neighbors in case of fire from a lighted cigarette, is a recently patented affair which emits a series of explosive noises. It consists of a number of fire-cracker-like units on a main fuse running around the mattress." Leave us have the concession for selling the Statler chain will ya! . . . Mrs. Mattie Mae Roberton, 27, burned her baby to death and stabbed her husband, another child and herself after a family squabble. She's detained in a San Francisco psychopathic ward.

. . . A pall of smoke from a corncob fire in a grain elevator at Milroy, Ind., resulted in the collision of two New York Central freight trains in March. A conductor was injured and several other crew members bruised. Fire didn't amount to much. . . . After July 1, 1951, it will be a penal offense in New York State to "jam" telephone lines deliberately,—a practice used recently during strikes, with some headaches to fire fighters. Governor Dewey signed bill providing maximum penalty of two years in prison on conviction for such a charge. . . . In Memphis, Tenn., a 20-year-old auto backfired, set fire to a filling station, drove dwellers of nearby apartments to the streets in near panic. Firemen confined the blaze to service station area. Nobody injured. Flames reportedly shot from car's exhaust pipe as the car's tank was being filled, set the gasoline hose afire, in turn igniting the pumps and then the station. . . .

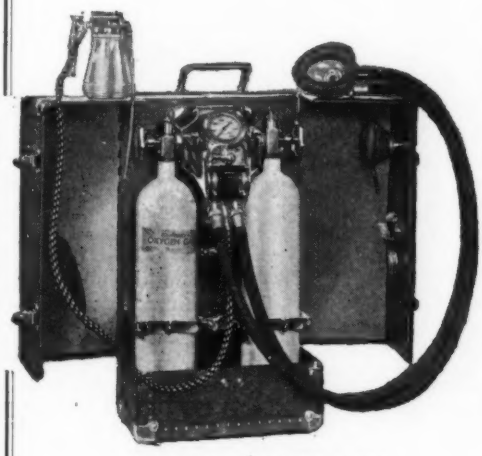
Trainmen on a passing B. & O. switch engine saved a family of six from a burning house in Baltimore. The engineer spotted the blaze as he was running his locomotive between two switch yards and stopped. One man ran to a nearby fire station; the engineer, Calvin Purdum, pounded on the door of the house. The housewife, thinking it was a neighbor performing his regular morning chore of waking the family shouted: "All right, Jack." "It's not Jack, lady," Purdum yelled, "your house is afire." Housewife and hubby, Charles Narer, and four children escaped safely. (Irving Johnson). . . . A 90-year-old Alvarado, Tex., man got tired feet, rubbed them with liniment, stuck them near the fire. You know the rest. . . . One person was injured, nine others escaped when a Fayette County (Ky.) fire rig en route to a farmhouse blaze off the Richmond Pike near Lexington, was involved in a four-car accident. The county pumper struck a southbound car at an intersection, driving it into a midget sized auto which stopped, waiting for the apparatus to pass. The fire rig, out of control, hit a parked car. Despite extent of wreckage, only the colored driver of the first car was injured. . . . In Poplar Bluff, Ia., fire truck driver Bimel Wheelis smelled a fire, but his speeding rig wasn't near enough to the address given in the alarm. "I smell fire," he yelled to the Brothers on the rear step. They made a quick investigation, found and extinguished the fire. The report entered in the Company journal read: "Driver Wheelis' hat on fire, cause unknown." . . . When firemen arrived at the home of Mrs. Helen McNeal in Philadelphia, her 12 dogs in the house kept interfering with operations to quell an oil stove fire. Finally blazebeaters called an ASPCA agent who corralled the hounds. . . . Something new in the line of fire fighting was encountered by Elizabeth, N. J. firemen when they were called to the home of Dr. Rudolph Baruch to water a flower bed. The bed was burning, whatsmore. The fire was attributed to faulty wiring in an electric hot bed in which physician grew posies that bloom through the winter. Forty plants destroyed. . . . Parents in Hudson Heights, N. J. boycotted the 53-year-old Ulysses S. Grant public school as a fire trap. . . . Estate of a fireman killed in a crash of a fire engine and an auto is being sued for a total of $100,000 at Newark, N. J. on grounds the driver was negligent in driving his apparatus too fast.

CHIEF—

Make Sure You Have

That Extra Protection Found in the

STEPHENSON RESUSCITATOR



STEPHENSON RESUSCITATOR
(Goodner Model)

With it, you can: Resuscitate and aspirate at the same time — Lower operating pressures in cases of chest injuries — Mix air in with oxygen! The Stephenson Portable Resuscitator offers you 4-way protection as an automatic resuscitator - inhalator - aspirator - assistor. Let us demonstrate its features and advantages at your next meeting.

Write Today—A Post Card Will Do.

STEPHENSON CORPORATION
RED BANK NEW JERSEY

Central 500-Gallon Equipment Recently Delivered to Jefferson Township, Ohio

CENTRAL FIRE TRUCK CORP.
4437 Manchester Avenue, St. Louis 10, Missouri

gets the drop on FIRE

DRENCH DOUBLES WATER SUPPLY SPEEDS ACTION

For faster, more thorough action on fire with less water, add Drench to your water supply.

Makes water wetter! Just a 1% proportion by volume of Drench added to your water supply will double its fire fighting effectiveness. Helps you fight fire faster . . . knock it down . . . and keep it down.

Drench effectively changes the characteristics of water without limiting its use or requiring special equipment. Join the hundreds of fire companies now using Drench. Write for complete details on how you can save on water . . . damage . . . and stand-by protection with Drench.

NATIONAL FOAM SYSTEM, Inc.
West Chester, Pa.

DRENCH

A NATIONAL FOAM PRODUCT

News of the Manufacturers

(*Continued from page* 446)

liant fluorescent stock. The company plans to mail them in sufficient quantities to furnish each member of a fire department with a copy, upon request of the chief.

Bar-Way Makes E. S. Flint General Manager

Edward S. Flint, industrial engineer and designer, has been appointed general manager of the Bar-Way Company of Stamford, Conn., manufacturers of high pressure streamlined hose couplings, it was announced today.

E. S. Flint

Mr. Flint has been associated with Bar-Way since 1949. He attended Bates College and Brown University. From 1936 to 1942 he was with the planning and production division of the Electric Boat Co. at Groton, Conn. During World War II he was manager of material controls for the Rheem Manufacturing Co.—and Walsh-Kaiser Co., Inc., at Providence, R. I.

From 1945 to 1947 he was in the engineering division of the U. S. Rubber Co. at Providence, and from 1947 to 1949 was standards engineer with the H. & B. American Machine Co. of Pawtucket, R. I.

In announcing the appointment of Mr. Flint, Dr. F. A. Bartlett, chairman of the board of the Bartlett Tree Expert Co., the parent firm, said that the Bar-Way Co. has expanded its volume 500 percent during the past year.

High pressure couplings are widely used in the U. S. armed services, and fire fighting and spray fiields. The couplings are tested for over 4,000-lb. pressure with a pull of more than 500 lb. For use in fire fighting, the couplings are adaptable to a wide variety of specifications.

Glass Fire Helmet

Molded fiberglass, said to have greater structural strength than stainless steel, on a strength to weight ratio, is used in the latest fire helmet. In addition to offering high impact resistance, the helmet is lighter in weight than many helmets made of other materials. Weight has been reduced to approxmately 20 ounces for the helmet complete.

Permanent colors are molded into the helmets, and while any color can be supplied, standard colors are black, white and red.

Ribbed crown design adds to the protective qualities, without sacrificing resilience, or the shock-absorbing char-

Janesville

JANESVILLE QUALITY TURN OUT CLOTHING

Our turnout suits are giving excellent satisfaction in most of the large fire departments throughout the U. S. and

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON JANESVILLE QUALITY

Janesville APPAREL CO.
JANESVILLE, WISCONSIN

New!

TRIPPE FRONT AND REAR FLASHER LIGHT CLEARS THE WAY

A gleaming, chromium Beauty, 7½" in diameter that sends its RED warning front and rear at 60 times a minute. In spite of its size it is very light and easily mounted on its aluminum pedestal.

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acteristics of the material. This resin bonded fiberglass material is impervious to moisture and most acids, has high dielectric strength, and will not support a flame.

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Glass is a natural insulator against heat and cold. An air space is left all the way around the headband assembly, allowing for ventilation, or the accommodation of earlaps and cold weather liners.

Patented six-point suspension of the headband assembly provides great strength to absorb blows, and also permits removal and replacement of the assembly in less than a minute.

Further information may be obtained by writing the manufacturer, E. D. Bullard Co., 275 Eighth street, San Francisco 3, Calif.

Greenwich Completes Second Training School

The Greenwich, Conn., Fire Department, Chief Stuart Potter, has completed a ten weeks training school for its paid and volunteer firemen. The School, which opened February 28 and closed May 2, was attended by about 200 firemen. The topics covered, and the speakers included: "Atomic Bombs as They Affect the Fire Service," Deputy Fire Marshall Henry P. Crawford, Greenwich; "Fires in Various Types of Occupancy," Chief Henry G. Thomas, Hartford, Conn., Fire Department; "First Aid and the Fireman," Capt. David W. Robbins, Greenwich Police Department; "Electricity as It Affects the Fireman," William E. Rossnagel, Safety Engineer, Consolidated Edison Company, N. Y.; "Care and Operation of Fire Apparatus," Edward Miner, Service Engineer, Seagrave Corporation; "Arson and the Fireman," George Clough, Fire Marshal Nassau County, N. Y.; "Hydraulics," A. Cary Hutson, former Engineer, National Board of Fire Underwriters; "Size-up," James J. Deasy, Ret. Batt. Chief, New York Fire Department; "Airplane Crash Fires," Chief Roi B. Woolley, Assistant Editor, FIRE ENGINEERING, and "Petroleum Fires—Bulk Plants, Tank Trucks," J. E. Jeffries, Asst. Chief Safety Engineer, Esso Standard Oil Company, Bayway, N. J.

Following a written examination, members with a passing grade will be awarded certificates.

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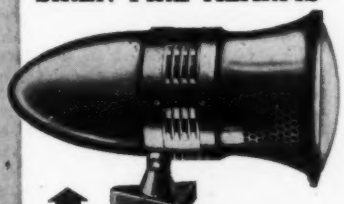

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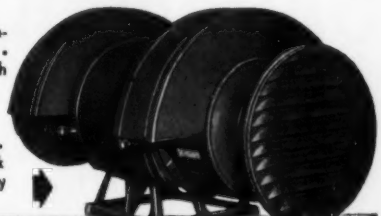

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Obituaries

Dr. David J. Price

Dr. David J. Price, U. S. Department of Agriculture chemical engineer until his retirement in 1949, died Monday, May 28, at his home, 701 Whittier Street, Washington. Dr. Price, a long time employee of the Bureau of Agricultural and Industrial Chemistry, was an authority on dust explosions and farm fires.

Dr. David J. Price

Dr. Price had been in Government service for 35 years, most of the time in the U. S. Department of Agriculture. He was born March 27, 1884, in Ashland, Penn., a coal-mining community. After graduation from Ashland High School in 1900, he took a college preparatory course at the Pennsylvania State Normal School and then studied coal-mine engineering while employed in mining work. He received degrees in mining engineering from Pennsylvania State College in 1925 and 1927, the M.S. degree in chemical engineering from George Washington University in 1927, and the Ph. D. degree from American University in 1931.

Before entering government service he was employed by the Bureau of Mines in its Pittsburgh Experiment Station where he participated in the investigation of causes and means for preventing explosions in coal mines and also in a cooperative investigation of grain dust explosions supported by the Millers' Association of Buffalo, New York, following a disastrous grain-elevator explosion in that city. In 1915 he was transferred to Washington where he inaugurated and developed the Department of Agriculture's investigation on grain-dust explosions.

Dr. Price served as a consulting specialist to Department of Agriculture and other federal government units, State organizations, individuals, and firms on engineering problems relating to explosions and fires, and he represented the Department in its contacts with national safety organizations, fire prevention associations, State industrial commissions and workman's compensation boards, insurance and underwriters' organizations, engineering standards committees, civic societies, and other agencies.

Dr. Price was the author or joint author of more than 160 articles dealing with the causes and prevention of dust explosions and farm fires. He did much to educate fire fighters to recognize the danger of possible explosion of inflammable dust while fighting fires in grain elevators, flour mills, wood-working plants, starch and other factories, and to take the necessary precautions.

The most recent result of Dr. Price's concern for the safety of workers in hazardous occupations is a safety manual intended to aid in the prevention of accidents in chemical laboratories, pilot-plants, chemical store rooms and mechanical shops, which was prepared in cooperation with the safety committees of the four U.S.D.A. Regional Research Laboratories for the guidance of scientific and technical personnel in the Bureau of Agricultural and Industrial Chemistry.

Chief J. J. Doherty

John J. Doherty, 64, Chief of the Winsted, Conn., Fire Department, and Supt. of the Water Department, died in the Litchfield County Hospital on May 19 following a series of heart attacks.

For many years Chief Doherty was an active member of the Winsted Fire Department and became a member of Rescue Hook and Ladder Company in 1912, long before the name was changed to the Aerial Ladder Company. He had served in various offices of the Company and, after serving as foreman for several years, was named Assistant Engineer in the Department. He was named Chief Engineer in 1947 upon the retirement of Chief Donald S. McPherson.

Chief Doherty was born in Camden, N. J., on August 1, 1866, and came to Winsted to live in 1893 when he was seven years old. He attended Winsted schools and had lived in that city since with the exception of two years when he was employed by the Alberthau Construction Company, New York City.

After being employed as a plumber, Mr. Doherty went into business for himself and continued in that capacity until he was named Superintendent of the water department three years ago.

TOM MAGNER

Chief T. J. Wrenn of Springfield

Fire Chief Thomas J. Wrenn, a member of the Springfield, Mass., Fire Department for 38 years, and its head since 1948, succumbed on April 29 after a long illness. He was 61 and his passing ended a career that began when fire apparatus was horse drawn. He succeeded another outstanding officer, Chief Herbert C. Root, and took charge of the department at the time it was undergoing a basic reorganization that involved shifting from a 72-hour week to a 48-hour week and other improvements.

Chief Wrenn, who was recognized by his associates in New England and elsewhere as an outstanding fire fighter and administrator, began his career as a fireman, Sept. 21, 1913. After five months' probation, he became a Grade A regular. In 1922 he was made lieutenant, after serving some months as acting lieutenant. He became Captain of Squad B at the Walnut street station in 1926 and was advanced to district chief in March, 1937. He succeeded

Arthur H. Strong as deputy chief in March, 1945, and held the post of acting chief a year before being named to fill Chief Root's place, in 1948.

He took an active part in the deliberations and other activities of New England Association of Fire Chiefs, the International Association of Fire Chiefs and the Massachusetts Fire Chiefs' Club.

Funeral rites for Chief Wrenn were held May 2nd, and attended by representatives of civic, fraternal and religious organizations from throughout New England. Large delegations participating included those from Massachusetts, Rhode Island and Connecticut, as well as members of the fire service from the eastern part of the nation. His associates and friends in this field led the funeral procession from the funeral home to St. Michael's Cathedral, where the religious services were held. Prominent also were all local city officials, including the officers and men, and three chaplains of the fire department.

A. E. Hansen, Elkhart Brass Company Founder

Death claimed the 82-year-old founder of the Elkhart Brass Mfg. Co., Albert E. Hansen, on May 10th, at his home in Elkhart, Indiana.

A. E. Hansen

Mr. Hansen organized the company which has become known in fire circles throughout the world, in 1902. Starting with 12 persons in its foundry and machine shop, the firm now employs over 300 and is one of the country's largest manufacturers of fire extinguishers and fire department brass goods.

Mr. Hansen had been Chairman of the Board of the firm for the past eight years. He was born in Oslo, Norway, April 7, 1869, and came to this country when he was 17, locating in Chicago, where he worked for the Crane Company for many years before moving to Elkhart in 1899.

Before organizing the brass concern, Mr. Hansen was factory manager of the former Acme Cycle Co. He married Grace M. Hull in 1900. She died in 1942.

Surviving Mr. Hansen are two sons, Edward H., now president of Elkhart Brass, and Elwood E., of Carpinteria, Calif.; a daughter, Mrs. R. L. Snideman, of Chicago, and seven grandchildren.

Funeral services were held at his late home, 11 St. Joseph Manor, the Rev. Leslie Skerry Olson of St. John's Episcopal Church officiating. Among the pallbearers were Joseph H. Green of New York City and Charles J. McCarthy of San Francisco, long time friends of the deceased.

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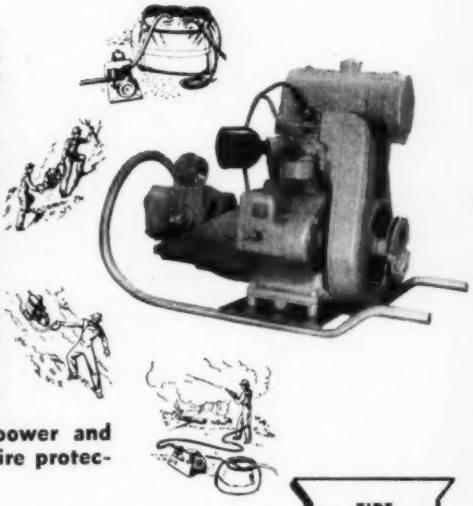

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When he needs it—where he needs it
Big Beam
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Model 700
2000-foot beam
Most powerful, heavy-duty hand lamp of its size. Adjustable 6-inch head. Operates on four standard No. 6 dry cells.

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1500-foot beam
Popular price, light weight, easy to carry. Adjustable 5-inch head. Operated on two standard lantern batteries.
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William Schleinitz

William Schleinitz, 54, President of the Dayton Fire Equipment Co. of Dayton, O., died March 12, following an operation. He had been ill since December.

William Schleinitz

Identified with the fire equipment industry for the past 35 years, Mr. Schleinitz had a wide acquaintance and was highly regarded in fire circles throughout the country. He founded the Dayton Co. in 1932, prior to which he had been associated with other fire equipment manufacturers.

Mr. Schleinitz, a veteran of World War I, held a B.A. degree from the University of Dayton.

He was a member of Second Trinity Lutheran Church, Dayton Lodge 147 (F&AM), Scottish Rite, International Fire Chiefs Association and the Fellowship club. He was also chairman of the operating committee of Bethany Lutheran Village, Lebanon Pike.

Survivors include his widow, Mary F., and a sister, Mrs. Richard Sellers, both of Dayton.

Edna Meaney Stoddard Dies Suddenly

Mrs. Edna Meaney Stoddard, president of the Leon R. Meaney Co., distributors of fire equipment, died suddenly following a heart attack in her home in Greenwich, Conn., on May 15, 1951. Her first husband was Leon R. Meaney, founder of the fire equipment company bearing his name, which she continued to operate after his death five years ago. She was found dead by her husband William, when he returned from work late in the afternoon.

Mrs. Stoddard, who was widely known to fire fighters in the New England area, operated her business from her home before, and after, her first husband's death. Mr. Stoddard, her present husband, is a contractor.

Besides her husband, she leaves her mother and an aunt.

Retired Chief Berkholtz of Fresno

W. C. Berkholtz, who retired as assistant chief from the Fresno, Calif., Fire Department after 42 years of service, died on April 12 last in Fresno. He was 75 years old.

Chief Berkholz joined the department in 1908 as an extra man. Three years later he became in rapid succession acting lieutenant, lieutenant and acting captain. In 1913 he was advanced to assistant chief. He was Fresno's first fire marshal and was responsible for numerous fire fighting improvements in that city. He had three sons, one of whom, Helmer, was killed in a fire apparatus accident in 1941. John H. Berkholtz, of St. Louis, another son, was a member of the department in the early twenties. His other son was also a member of the department.

Persons in the News

F. R. Dimond Chief at Hutchinson, Kans.

Assistant Chief F. R. Dimond has been appointed Chief of the Huchinson, Kans., Fire Department, upon the retirement of Chief W. H. Hazell.

Chief Dimond joined the fire department on June 21, 1926, was promoted to Captain on April 1, 1939, made Drill Master October, 1942, and First Assistant Chief on January 12, 1945.

The Chief has been very active in firemanic affairs. He served as president for three years of Local 179, International Association of Fire Fighters, and is a charter member of the Kansas State Council of Fire Fighters. It was during his presidency of Local 179 that he led the fight for civil service which was passed by the State Legislature for Hutchinson in 1935.

Chief Dimond served as president of the Kansas State Firemen's Association for two years, and for three years on the Board of Trustees of that organization.

Chief Dimond has always been an ardent supporter of educational programs and through his interest in that field he was admitted to Oklahoma A & M College in November, 1942, where he completed an eighty-hour course in training and leadership as applied to firemanship. Upon completion of this course, he was one of two captains chosen from the State of Kansas to train and teach firemanship in connection with civil defense during World War II.

Chief Cullinan of Morristown Honored at Banquet

John J. Cullinan, head of the Morristown, N. J., Fire Department for the past 27 years, was honored for his long and loyal service to the community at a testimonial dinner attended by more than 250 fellow firemen and well-wishers, on May 5, 1951.

Chief Cullinan, better known as "Smokie" to his New Jersey colleagues, was made a volunteer chief of the department in 1924 and four years later, the paid head of the department. He has been active in local, State and regional fire service circles and is a long-time member of the International Association of Fire Chiefs.

Among those who spoke of the service rendered by Chief Cullinan were: Mayor W. Parsons Todd of Morristown; Charles W. Greenfield, president of the New Jersey State Fire Chiefs Association; Andrew Hutch, president of the New Jersey Exempt Firemen's Association; Chris Hasselhuhn, president of the New Jersey State Firemen's Association.

and many other invited guests, including fire officers from New York City. The Master of Ceremonies was Robert H. Schenck.

During the ceremonies, Chief Cullinan was presented a well-filled wallet by William Callahan of the First Ward Hose Company.

Chief Trombley of Sault Ste. Marie Retires

Fire Chief F. F. Trombley retired on May 1 as head of the Sault Ste. Marie, Mich., Fire Department, after 45 years of service with that organization, thirty years of it as its head.

The widely known and popular chief announces he will always have the fire service at heart and will continue to serve its interests whenever and wherever possible. His mail address will be Sugar Island, Star Route, Sault Ste. Marie, Michigan.

C. T. Bissell to Retire

Clinton T. Bissell, who in his 42 years with the National Board of Fire Underwriters has been closely identified with development of the National Board's building code, is preparing to retire. He was appointed consulting engineer in 1927 when he took over the responsibilities of editing the code and assisting municipalities wishing to adopt it. He has been granted leave of absence until Dec. 31, 1951.

The staff of the Construction of Buildings department has been transferred to the Engineering department of the National Board, under the supervision of the chief engineer.

Montrose Chief Heads Westchester Fire Chiefs' Emergency Plan

Chief Joseph Carroll, of Montrose, N. Y., is the new president of Westchester County Fire Chiefs Emergency Plan, the organization founded in 1928 to promote mutual aid between the cities, towns, villages and fire districts of that county.

The election was held at the annual dinner of the "Plan" attended by nearly 500 members and guests, at Schmidt's Farms, Scarsdale. The new president succeeds Chief John S. A. McAuliffe, of Croton-on-Hudson, N. Y.

Also elected are Chief Irving Wallach, Pelham, first vice-president; Chief Edward J. MacDonald, White Plans, second vice-president; Chief James Coleman, of Ossining, third vice-president; former Chief Arden Smith, Port Chester, treasurer; Chief Arthur Miles, Pleasantville, recording secretary; Capt. Howard Geer, Rye, financial secretary, and Chief Cornelius Falch, Rye, sergeant-at-arms.

Directors elected for two years are: Chiefs William Lemon, Mamaroneck Village; Samuel Forsythe, Bedford Village; William Rottenberger, Mount Kisco, and Frederick Perdussi, of North Tarrytown.

Chief Roi Woolley, a director of the "Plan", is County Fire Coordinator and Commissioner Charles Jahne, also a director, is chairman of the County Fire Advisory Board; both continue to hold office.

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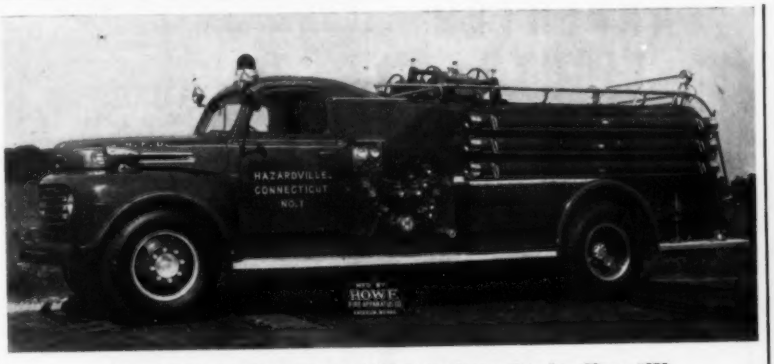

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The Chief picks up his Portable SEARCHMASTER. He's inside the building in time to handle most fires before they get to the dangerous stage, and before floodlights can be set up. All the light you want at the snap of your thumb. Patented handle points anywhere *without cocking arm.* Rechargeable.

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200 Master-Light Bldg.
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MASSACHUSETTS

With Our Readers

Delayed Alarm a Misnomer

To the Editor:

The use of the wording "delayed alarm" by the press and radio is a misnomer and is generally untrue, as used. Actually, what should be used in most cases is "delayed notification" or "delayed discovery." Use of the phrase "delayed alarm" conveys to the public and some city officials the unfounded idea that the delay was in the fire alarm office and in the fire alarm dispatching, which is not true.

No dispatcher has been known to "hold an alarm"—or "delay it," and consequently delay the movement of apparatus to the emergency existing. Fire alarm operators and dispatchers are generally proud of the speed and accuracy with which fire calls are handled by that branch of the fire service. When one considers the number of fire calls handled nationally in this nation, and notes the various methods employed in receiving and transmitting signals and other forms of fire department communications without error or delay, the real efficiency of the modern fire service communications becomes apparent.

The term "delayed alarm" casts a shadow of guilt on the fire alarm facilities, which is unfair. The fire officer reporting to the press could eliminate that shadow by using the proper wording as to the cause of the delay in notification.

The use of recording devices and time stamps in many municipal fire departments bears witness to the fact that fire alarm operators and disptachers do not delay any alarm. It is being proved every hour of the day somewhere in this country's fire service that to receive an alarm and transmit the signal or message to the fire forces, does not take more than 30 seconds. This record is being maintained even where a multiplicity of calls may place unexpected and unusual demands upon the fire alarm staff.

Every fire or emergency call received by a fire department in this nation calls for employment of some form of communications facility and for capable, trained personnel to operate those facilities. Few if any errors traceable directly to this branch of the service are found, generally. Therefore, why should a term be used that casts disapprobation upon the service.

The fire alarm operator and dispatcher's duty is as much a science as that of any communications expert who must deal directly with life and death. Such details as trying to get proper information from excited and panicked persons; to untangle the garbled pronunciation and directions of excitable persons; the problem of how to cope with simultaneous fires or emergencies and to relocate companies and shift fire forces in order to keep areas properly protected, to name a few, call for cool-headness and stamina. Yet the men of the fire alarm bureaus and the systems employed are little known, in not a few cases, even by the members of their own fire departments.

In some departments the fire alarm headquarters is expected to notify the press about fires, and release information to reporters, but this information is prepared by members of the department who may not have been remotely connected with the particular incident related. This, of course, can contribute to confusion over terms.

In one southern city, although they maintain an operator at all times on the board, it is the practice to assign a "light duty" fireman to operate the radio, with the result there is inefficiency and confusion, particularly when emergencies overlap.

Very truly yours,

PAT HOTZ

Firemen in Civil Defense

To the Editor:

Your editorial in the May issue of FIRE ENGINEERING is certainly true and timely. I never fail to read your editorials but in my opinion this is one of the best, if not the best, it has ever been my privilege to read. If we could just get more people behind this Civil Defense program and especially the part that firemen will play, we would quickly realize a real Civil Defense.

Congratulations again and keep up the good work.

Sincerely yours,
W. H. BARNETT,
Supertintendent.

Florida State Fire
College, Ocala, Fla.
May 23, 1951

Room for Improvement in Planning

To the Editor:

I have just finished reading your open letter to Mr. Millard Caldwell in the May issue of FIRE ENGINEERING, and while I hesitate to bore you with more compliments, I do think you and FIRE ENGINEERING are to be congratulated on the sensible stand you are taking in the interest of civil defense.

Unless and until Mr. Caldwell takes heed of your advice, civil defense is bound to remain a high-sounding plan on paper but totally lacking in practicality should it ever be put to test in the future. The fire service in general and I in particular owe you a debt of gratitude for your unfailing services toward our welfare. I would like to see your article given extensive circulation and hope that it will find its way to the right channels.

With all good wishes to you and my other good friends in FIRE ENGINEERING, I am

Sincerely,
FRANK C. MCAULIFFE.
Chief of Patrols,
Chicago Fire Insurance
Patrol, Chicago, Ill.
May 23, 1951

Needs of Civil Defense

To the Editor:

This is just a note to compliment you on the nice editorial in the May issue of FIRE ENGINEERING. I know that the fire service will appreciate the manner in which you are speaking out in their behalf and trying to educate some officials in the civilian defense set up as to where the real need for an adequate defense system exists.

Yours very truly,
H. WALKER.
Mgr., M.F.A. Sales
American-LaFrance
Foamite Corpn.
Elmira, N. Y.
May 21, 1951

Ladders

(*Continued from page* 435)

Basically, most of the procedures recommended for maintaining wood ladders in good condition apply to aluminum ladders.

Unless they meet with an accident in handling, aluminum ladders require a minimum of maintenance attention. However, they should be carefully inspected after every fire and drill or other usage. They should be given a thorough inspection and test periodically. This applies particularly to ladders that have been in active service over eight years.

Aluminum ladders are greater conductors of heat and cold than the wood type, although they are lighter and stronger than wood. Shortage of the latter, as has been stated, is expected to eventually result in almost universal use of the metal types by the fire service.

Because of their conductivity, care should be exercised in the use of metal ladders around electrical equipment. Where such ladders have been subjected to excessive heat from a fire, they should be carefully inspected and tested before being returned to service. Possible injury may be determined by the coloration of the metal, sag or distortion of beams or rungs. However, discoloration may not always be from excessive heat. Therefore attempts to sandpaper it off should not be made before determining whether the discoloration indicates structural defect, or is merely surface stain.

Aluminum ladders should be given the same care in handling and use that is advocated for wood ladders. They should be examined for alignment of beams, twists or bends; loose rungs; dents or damage to rails or rungs; cracks or splits; loose rungs; loose or sheared rivets, and any deterioration in the channels and "T" sections where openings in the metal may permit accumulations of foreign matter and moisture.

Where the rungs of metal ladders are covered with rubber or other insulation these "grips" should be tight and free of foreign material that may cause injury to the hands.

Metal ladders may be coated with proper aluminum paint or any other coating recommended by the manufacturer. Many departments do not consider this necessary as long as the metal is kept clean and free from stain and abrasion.

Expendable Extinguisher Eyed by Army Engineers

Engineers at the Army Engineer Research and Development Laboratories, Fort Belvoir, Va., have under consideration a disposable fire extinguisher that can be used once and thrown away, like a tin can or paper plate, it is revealed. The new container will be designed to handle the recently developed extinguishing agent, Trifluorobromomethane, also an ERDL discovery. This extinguishing agent with the unpronouncable name is said to be twice as effective on Class B and C fires as commonly used agents.

Fire engineers at the Laboratories will test several hundred of the new units under atmospheric extremes to determine the ability of such containers for controlling electrical and gasoline fires under varying climatic conditions.

Champion Fire Apparatus

Champion Fire Pumps

NEW 44 PAGE BOOKLET of FIRE APPARATUS & FIRE PUMPS

Write Today For Your Copy

W. S. DARLEY & CO., CHICAGO 12

The Swing is to "US" Electric Plants
More and more fire departments are turning to "U. S." for *dependable* emergency power units. Portable and Stand-by plants. *Write for complete information.*
United States Motors Corp.
430 Nebraska St.
Dept. B
Oshkosh, Wis.
UNITED STATES MOTORS CORPORATION
US
OSHKOSH, WISCONSIN

HONOR ROLL PLAQUES

PAY tribute to firemen in the armed services with handsome simulated bronze and solid walnut plaques. Choice of sizes to accommodate any number of easily applied nameplates. Prompt service. Satisfaction guaranteed. Write for free information and moderate prices. Address Dept. 13.

TROPHIES and MEDALS, TOO!

Special catalog illustrates 900 cups, trophies, medals, etc. suitable for presentation as prizes and awards in all kinds of contests, or for testimonial purposes. Sent free — ask for Catalog FE2.

INTERNATIONAL BRONZE TABLET CO., INC. 350 WEST 22nd ST. NEW YORK 11, N. Y.

Flashing Signal

For Emergency Vehicles

Price complete $8.00: may be supplied with automatic flasher unit $1 extra. Furnished with red or blue lens as desired. 6-inch lens 32 c.p. or 21 c.p. bulb.

Also in stock for immediate shipment complete line of

- **Indian fire pumps**
- **rattan fire brooms**
- **traffic batons**
- **first aid cabinets**
- **many other fire fighting items**

Send for free copy of Catalogue No. 51
DEALERS WANTED

FIRE-END PRODUCTS
19-21 Beekman St., New York

Floodlighting

WHERE YOU NEED IT!

EASILY CARRIED
Lightweight and compact, Onan Electric Plants can be hurried to the spot where needed. Supply current for floodlights, electric saws, drills and other tools. Always ready for instant use.

FIT INTO SMALL SPACE
Compact, self-contained Onan Electric plants can be ordered as standard equipment with many makes of new fire trucks. Just a few square inches of mounting space required for installation on old trucks.

Write for FREE Folder!

Special folder describes many lightweight models for fire department use. D.C.: 750 to 5,000 watts. A.C.: 400 to 3,000 watts. Large, water-cooled plants for emergency operation of signal systems to 35,000 watts.

Onan

D. W. ONAN & SONS INC.
5683 University Ave., Minneapolis 14, Minn.

Hose Specifications

To the Editor:

I would like very much to have some information on certain specifications of fire hose. For instance I have here a specification which states that the hose is made with a 12/18 warp and a 12/66 filler.

I understand that the 12 designates the strength quality of the thread and I thought perhaps that the 18 designated the number of strands in the complete thread, which counted out all right, but when I came to the 66 count in the filler I could only count 30 strands, so I came to the conclusion that the numbers must mean something else.

I would appreciate it very much if you could shed some light on this for me. C. S.

Answer: It is interesting to note that whereas the hose specifications call for warp cords of 18 strands of #12 yarn and a filler cord of 66 strands of #12 yarn, the hose delivered, apparently, was made up of warp cords of 18 strands of #12 yarn and filler cords made up of only 30 strands instead of 66 strands.

The prefix "12" does not indicate the strength of the yarn; in fact, it has no bearing on the strength of the yarn. It merely indicates the size of the yarn, and the suffix numeral indicates the number of strands of yarn, making up the cord. As you can readily appreciate, the tensile strength of the cord or yarn depends almost entirely on the length of the staple.

Advantages of Centrifugal Pumps

To the Editor:

Can you give me the advantages and disadvantages of a centrifugal fire engine.

I have your publications before me and I have gone through them several times, but I cannot find anything in them about centrifugal pumps. P. G. B.

Answer: The centrifugal pump possesses several advantages over the positive displacement type for fire service. In the first place, it is highly flexible, and the discharge can be varied between wide limits without putting undue strain on the engine. For example, the discharge valve can be shut off and the pump will continue to turn over without the necessity of operating a pressure relief valve. A sudden shutting off of a nozzle on the line of hose will not stall the motor such as might be the case with a positive displacement pump where the automatic relief valve failed to operate promptly.

Centrifugal pumps create less vibration in the hose line than do positive displacement pumps, and thus eliminate much of the chafing of hose where it rests against curbs, or other sharp, hard objects.

The centrifugal pump can utilize a greater percentage of the hydrant pressure than can a positive displacement pump, enabling the unit to deliver either higher nozzle pressure or greater flow.

The centrifugal pumping engine is simpler to operate than the piston type engine.

Insofar as the disadvantages of this type of pump go, as compared with the positive displacement type, there are none which are serious. Improvements in priming equipment have solved the problem of priming of pump where lifting water by suction, which with some early designs of centrifugal pumps left room for betterment.

Restriction in Use of Apparatus Warning Lights

To the Editor:

An associate recently wrote me as follows:

1. Do you know that it is unlawful in California to return from a fire with your red lights on? 2. That it is against the law to use flashers or red lights en route to a fire? 3. Flashers and circling lights can only be used when the truck is standing still.

I would indeed appreciate your advice as to whether or not the above statements are correct, and also whether the matter involves a state law.

It seems to me there would be little purpose in putting red lights on fire trucks at all if they cannot be used in clearing the way for the apparatus. C. B. M.

Answer: These questions were submitted to Chief John H. Alderson, Los Angeles, Cal., who is President of the International Association of Fire Chiefs. His comments are as follows:

"1. It is not unlawful in California to return from an alarm with red lights on. It is true that most fire and police departments in California do not return from alarms with red lights on. The Los Angeles Fire Department did for many years. After a great deal of study and thought, our chief officers' group decided, and I concurred, that we should discontinue the use of red lights on return from alarms.

BRASS EXPANSION RINGS

FOR FIRE HOSE

Standard Sizes Carried in Stock

Inches O. D.	Inches Long	Thick
¾	¾	.042
¾	⅞	.042
1	⅞	.042
1	7/8	.042
1¼	⅞	.042
1¼	⅞	.042
1¼	1	.042
1½	⅞	.051
1½	⅞	.051
1½	1	.051
1½	1¼	.051
2	1	.051
2	1¼	.051
2 7/16	1¼	.062
2 7/16	1½	.062
2½	1¼	.062
2½	1½	.062
3	2	.070
3½	2	.083
4	2	.083
4½	2	.083

BELL—PIHL rings are cut from seamless drawn yellow brass tubing fully annealed—dead soft—allowing for maximum expansion with complete safety. Each ring well rounded on both ends—no burrs.

BELL-PIHL will cut rings any special size to suit your requirements.

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17 WYMAN STREET
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DESIGNED BY FIREMEN

FOR YOU

300 Watt 110 Volt Floodmaster Light. Burnished cast aluminum lamp housing and base. Hubbel twist lock male connector in base. Weighs only six pounds. Use with your 110 volt generator or plug into neighbor's outlet for plenty of light at every fire.

$21.00

ARGUSLITE CO.
BLUE RIDGE SUMMIT, PENNA.

"Under State law, we are required to return from alarms complying with all traffic regulations. In other words, we have no special privileges on return from alarms. For many years we did keep our red lights on and the police officer on the corner did give us special privileges. We learned that this was bad public relations. We have discontinued the use of red lights on return from emergencies.

"2. This is not correct. The law of California requires the use of red lights and the continuing sounding of a siren within reason while en route to an emergency call.

"3. I am not entirely clear as to what is meant by 'flashers.' It is quite true that it is illegal in the State of California to use red lights which revolve and which throw a red beam to the side and to the rear of an emergency vehicle. We use in this department in many cases what are known as oscillating red lights. These are entirely legal as long as they do not cast a red beam direct to the right or left or rear. All of these matters are controlled in California by State law."

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of May, 1951.

Month Ending May 31, 1951

Bessemer, Ala.—New Zion Baptist Church destroyed.

Birmingham, Ala.—Twenty frame duplexes and small grocery destroyed.

Montgomery, Ala.—Drugstore bldg., occupied by Lee Drug Co., destroyed.

Blytheville, Ark.—Two business bldgs. occupied by Victory Cafe, Blytheville Shoe Shop, Pat O'Bryant's Jewelry Store, Tot Shop, Jonny Marr's real estate office, Russell Marr's liquor store and five apts., destroyed.

Magnolia, Ark.—Business bldg. owned by Dr. A. B. Elmore estate damaged. Columbia Butane Gas Co. and C. C. Otwell jewelry store and two apts. also damaged.

Lindsay, Cal.—Lindsay's business district including six business establishments and a group of law offices, damaged.

Palos Verdes Hills, Cal.—Air Force bldg. damaged. Arson.

San Francisco, Cal.—Garrett Press bldg. damaged.

Tuttle, Cal.—Grocery, garage and cafe damaged.

Danbury, Conn.—Junk whse. damaged.

New Haven, Conn.—Candy factory, main plt. of Mary Oliver Candy Co., damaged.

Wilmington, Dela.—William Penn Diner, DuPont Pkway., destroyed.

Panama City, Fla.—The Arizona Chemical Co. plt. damaged. Explosion. The chem. co. is operated jointly by International Paper Co. and the American Cyanamide Co. and refines turpentine for International's southern kraft plt.

Moultrie, Ga.—The Darbyshire Tractor Co. destroyed.

Lewiston, Ida.—Emporium Dept. Store destroyed.

Lincoln, Ill.—Whse. owned by Spellman Lumber Co. damaged. Boy playing with matches.

Palmyra, Ill.—Eleven business bldgs. damaged.

Peoria, Ill.—Restaurant bldg. owned by Howard Kinsey, damaged.

Springfield, Ill.—The Farm, suburban restaurant, destroyed.

Indianapolis, Ind.—Success Plastic Recovery Works plt. and two business bldgs., damaged.

Lafayette, Ind.—Sheep barn on Purdue University campus, destroyed.

Hays, Kans.—Hurst Motor Co. bldg. destroyed.

Topeka, Kans.—Lardner stone plt. damaged.

Henderson, Ky.—The Colonial Furniture Co. plt. destroyed.

Henderson, Ky.—Bldg. occupied by Tel-A-Ray Enterprises, Inc., destroyed.

Lebanon, Ky.—Growers Tobacco Whse. destroyed.

FIREWATER

the "Wet Water" that's

✓ unconditionally guaranteed

✓ lowest in price

✓ absolutely non-corrosive

FIREWATER* is the tested and proved chemical penetrant that actual laboratory tests have proved to be no more corrosive than distilled water . . . that is used at a dilution rate of 1:600 for maximum effectiveness . . . that is unconditionally guaranteed!

That's the story that is putting FIREWATER in a class by itself among "wet-water" compounds. FIREWATER will do the job—safely, efficiently, *and* economically.

Write *today* for more details—and for *free* diagram of simply made, low-cost proportioner you can make yourself.

FIREWATER COMPANY
1 First Street
Los Altos, Calif.

Please send me full information on FIREWATER and FREE proportioner diagram.

NAME.....

ADDRESS.....

CITY & STATE.....

The FIREWATER Co.
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LOS ALTOS, CALIF.

*TRADE MARK

BODY-GUARD
BUNKER SUITS
FOR COMFORT & PROTECTION

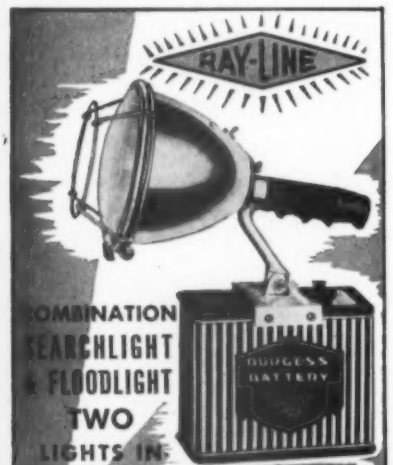
WE ARE DISTRIBUTORS FOR

SIREN BOOTS

We have been supplying **FIREMEN'S CLOTHING** for over 75 years.

Any fireman can have a catalog by writing —

BODY-GUARD MANUFACTURING CO.
ST. JOSEPH - - MISSOURI



COMBINATION SEARCHLIGHT & FLOODLIGHT TWO LIGHTS IN ONE STYLE No. 1075

The Ideal Fire Fighter's Light.

- "Half-Mile-Ray" for distance.
- Floodlight for nearby use.
- Rubber handle, easy to carry.
- Long-life dry battery for economical operation.
- Backed by 28 years' experience.

Send for Catalog F 51

THE PORTABLE LIGHT CO., Inc.
216 WILLIAM ST., N. Y. 7, N. Y

Louisville, Ky.—Night club, the Plush Club New Orleans, damaged.
Stanford, Ky.—Stanford Stock Yards and six dwellings damaged.
Baltimore, Md.—The old Cross Street Public market, destroyed. Thirteen nearby houses and business bldgs. damaged.
Crisfield, Md.—Freight boat C. A. Christy destroyed. Short circuit.
Acushnet, Mass.—Dairy barn and 106 cows on farm of Raymond A. White, destroyed.
Arlington, Mass.—Lumber and sheds of Arlington Coal and Lumber Co., Arlington Hts. section, damaged.
Cambridge, Mass.—Bushway Ice Cream Co., Sugarman Bros. Paper Supply Co., Cambridge-Somerville Line and bldg. of J. Nissebaun & Co., damaged.
Southboro, Mass.—General Mills, Inc., storehouse, destroyed.
West Bridgeport, Mass.—Garage and trailer trucks of White Trucking Co. damaged.
Brooklyn, Mich.—Tavern, village post office, beauty parlor, cafe, small mfg. firm, destroyed.
Detroit, Mich.—Wayne Aluminum and Machine Co., Caton township, damaged.
Flint, Mich.—But McKerring Inc., Ford agency, damaged. Welder's torch.
Anoka, Minn.—Six bldgs. on farm of Mrs. H. A. Smith, destroyed.
Lake Lillian, Minn.—Farmers elevator destroyed.
Laurel, Miss.—Ellisville First Baptist Church destroyed.
Hollister, Mo.—Combined grade and high school bldg. destroyed.
St. Joseph, Mo.—Schultz Studio and St. Joseph Beauty Univ. and George H. Meyer, Inc., barber supply house, damaged.
St. Louis, Mo.—Lumber storage bldg., Thrift Hardware & Supply Co., badly damaged.
St. Louis, Mo.—The Madison Coal & Feed Co. damaged. Short circuit in wiring.
Unionville, Mo.—Six business bldgs., Putnam County courthouse square, occupied by Royal Theatre, Shuey Photographic Studio, Burdman auto parts store, Brassfield Clothing Co., Rouse & Hoyt Philco radio shop, Rouse barber shop, destroyed. Paint supplies in theatre.
Lincoln, Neb.—Italian Village, swank restaurant, destroyed.
North Platte, Neb.—Supermarket operated by Buel Borden, gutted.
Summit, N. J.—Lyric Theatre, L. E. Apgar's jewelry store and Fisher's women's apparel shop, damaged.
Farmington, N. M.—Delhi Oil Co. well damaged.
Shiprock, N. M.—Dormitory at Indian Service boarding school destroyed.
Fort Edwards, N. Y.—The Northern Pine Corp. lumber yd. including a storehouse, drying kiln and grinder house on the company's 26-acre site and 6,000,000 feet of board lumber.
Hoosick Falls, N. Y.—John Galhoun & Sons dairy farm damaged.
Lake Placid, N. Y.—Whiteface Mountain ski lodge destroyed.

Rate $8 per inch less 10% for three or more consecutive insertions.

Classified Advertisements

Closing date for copy 25th of month preceding date of issue.

FOR SALE
SURPLUS

1½" DJ CRL fire hose, unused, but soiled—$.75 per ft., cpld.
2½" DJ CRL fire hose, unused, but soiled—$.95 per ft., cpld.
1½" SJ CRL fire hose, unused, but soiled—$.35 per ft., cpld.
2½" SJ CRL fire hose, unused, but soiled—$.65 per ft., cpld.

UNUSED & CLEAN FACTORY PACKED

1½" DJ CRL fire hose—$.89 per ft. Couplings—$6.75 per set, attached
1½" SJ CRL fire hose—$.42 per ft. Couplings—$4.50 per set, attached
2" DJ CRL fire hose—$1.06 per ft. Couplings—$9.25 per set, attached
2" SJ CRL fire hose—$.56 per ft. Couplings—$4.75 per set, attached
2½" DJ CRL fire hose—$1.29 per ft. Couplings—$9.75 per set, attached
2½" SJ CRL fire hose—$.71 per ft. Couplings—$7.50 per set, attached

ALL HOSE IN 50' LGTHS.
Delivery—from stock

TOWSON HOSE & RUBBER CO.
104 West Joppa Road
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POSITION WANTED
Fire Protection Field—In Municipality or Plant. 26 Years of Experience in Fire Engineering, Fire-Prevention, Protection and Fire Fighting, Maintenance Supervision and Personnel Training. Age 49. Married and Unlimited References. Write to Box 200, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

REPRESENTATIVES WANTED
Territory available in Ohio, Kentucky, Tennessee, and other eastern states for the right men to sell leading make of modern Fire Apparatus. Write details of experience and territory wanted. Box 245, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

FOR SALE
About 700 ft. 3-braid Nylon Red Covered ¾" Fog Hose. About 2700 lb. breaking strain and guaranteed for 800 lbs. working pressure. Also some 3-braid red-covered booster hose, ¾" size. Will apply CHROME PLATED couplings or sell less couplings. If you want the RED BOOSTER hose, you should order now as there is very little to be had. None in production since early in Nov. 1950.
LOUIS B. BARTLETT Adams, N. Y.

POSITION WANTED
Fire Protection Field—In Municipality or Plant. Experience in Fire Fighting, Fire Prevention, Maintenance and Arson Investigation. Best of References. Will go anywhere. Age 23. 8 years experience. Address replies to Box 230, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

YOUR OPPORTUNITY!
National fire equipment manufacturer expanding product lines requires high calibre representatives in Eastern and Midwest areas. Unusual earnings and advancements for qualified sales representatives. Persons selected will receive training and field assistance. Write for interview giving details of experience. All inquiries confidential. Reply to Box 240, c/o FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

FOR SALE
1—1927 American-LaFrance Metropolitan Combination 1000-gal. pumper and hose truck with 150-gal. booster tank. For complete information contact:

ROBERT MURRAY, FOREMAN
PROTECTION ENGINE CO. NO. 1
Port Washington, N. Y.

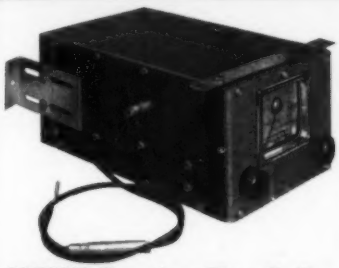
STRAINERS WANTED
Surplus marine type strainers, 2½" and 1½" sizes. Advise condition and price. Write to Box 250, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

FOR SALE
One 1941 Peter Pirsch 500 gallon pumper with 300 gallon Booster. Fully equipped. For further information contact:

SECRETARY
FRANKLIN FIRE COMPANY
Chambersburg, Penna.

AGENCY WANTED
Company desiring to commence manufacture of fire engines, requires a pump agency for Western Canada. Willing to send man to factory for full course on installation and maintenance of pumps. Write to:

SASKATOON FIRE ENGINE COMPANY LIMITED
1002 Third Avenue North
Saskatoon, Sask., Canada



NOW! Receive Fire Calls at Home or in your Car

No fire officers (regular or auxiliary) should be without this essential piece of equipment. For with the new MONITORADIO 6-Volt Mobile FM Radio Receiver you can follow dispatch directions instantaneously. A complete receiver — not a converter! Covers all 2-Way FM Radio-Telephone Communications. Well-engineered and built of quality parts. Tunes frequency of 152 to 163 megacycles. For full information, see your parts jobber or write us today!

$72.50 NET

Also, AC-DC Model PR-31 for 30 to 50 Megacycle Band and AC-DC Model PR-8 for 152 to 163 Megacycle Band — both models $44.95 each NET.

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RADIO APPARATUS CORPORATION
INDIANAPOLIS INDIANA

First line of defense for

DISASTER EMERGENCIES

is

COLLAPSI-COT

Patent 2517443

The Fire Department is first on the scene in any disaster emergency whether it be fire, flood or earthquake. Now, with atomic warfare a possibility, more urgent demands will be made. COLLAPSI-COT can help you meet present needs as well as anticipated demands because . . .

. . . it is more maneuverable . . .
. . . it can be installed in chiefs' cars or panel trucks for emergency ambulance duty . . .
. . . it can be procured at low cost . . .

For particulars on how COLLAPSI-COT can be used by Fire Departments for disaster emergencies, write E. F. Hinkamp,

TEC Industries, INC.
(formerly Emergency Aids Company)
2018 WEST NORTH AVENUE
CHICAGO 47, ILLINOIS

Little Valley, N. Y.—Six business bldgs. occupied by the Freming Hotel, Merow Bros. Hardware Store, the Ebersole Restaurant, McLouth's Drugstore, the Lowe Dry Goods Store and Gift Shop, destroyed.
Manlius, N. Y.—Dodge gymnasium on campus of Manlius School destroyed.
Lincolnton, N. C.—Dixie Wholesale Grocery Co. destroyed.
Akron, Ohio—Bldg. occupied by Republic Dye & Chemical Corp.; also occupied by Plastic Film Products Corp. and Harwick Standard Chemical Co. damaged.
Cincinnati, Ohio—Pearlee-Gaulbert Corp., including television sets, home appliances and linoleum, damaged.
Cleveland, Ohio—Younglove bldg., occupied by stores and factory, destroyed, and two other bldgs., damaged.
Steubenville, Ohio—Kink Furniture Co. damaged.
Altus, Okla.—The United Wholesale Grocery Co. damaged.
Oklahoma City, Okla.—Beverly's Drive-In Restaurant, damaged.
Childs, Pa.—Coal breaker damaged.
Conshohocken, Pa.—Bldg. of Lee Tire & Rubber Co. plt. destroyed.
New Kensington, Pa.—Hillcrest Country Club destroyed.
Philadelphia, Pa.—Master Craft Upholstery Shop destroyed.
Philadelphia, Pa.—Plt. of Knife-Crafters, Inc., Lardner Point, and adj. dwelling of Mrs. Marie Angle and Henry Woodring; also two yachts in yd. of Wissinoming Yacht Club, destroyed.
Philadelphia, Pa.—Graco Metal Products Co. plt. destroyed.
Philadelphia, Pa.—Reda Trailer Service Garage, seven trailers and two trucks, destroyed.
Philadelphia, Pa.—Garage of Bryant Air Conditioning Corp. and whse. of Perloff Bros., badly damaged.
Philadelphia, Pa.—Pier 46 South, a 225-ft., one-story Delaware River pier, destroyed; British freighter Pineland, damaged.
Royersford, Pa.—Foundry at Royersford Foundry and Machine Co. destroyed.
Bristol, Tenn.—Edmonds Bros. Supply Co. whse. destroyed. Lightning.
Dyersburg, Tenn.—Harold D. Kellar Motor and Equip. Co. destroyed.
Cedar City, Utah—Thornton Drug Store and Coffee Shop and offices destroyed.
Willwyn, Va.—Plt. of Seay Milling Co. and two smaller bldgs., Buckingham County, damaged.
Burlington, Vt.—The Van Ness House, hotel, damaged.
Belvedere, Wash.—Lumber Co. destroyed. Explosion diesel engine.
Ellensburg, Wash.—Winston Shingle Mill, Lake Kachess, bldg. equip. stocks destroyed.
North Booneville, Wash.—North Booneville Garage, Dusie's Cafe, destroyed. Vulcanized tire.
Seattle, Wash.—Roller Bowl Skating Rink destroyed.
Seattle, Wash.—Harbor Island Machine Shop damaged.
Yakima, Wash.—Otis Riggs whse. destroyed.
Matoca, W. Va.—Dale Bailey garage and filling station destroyed. Adj. Blankenship service station damaged. Welder's torch.
McMechen, W. Va.—The Marx Toy Mfg. Co. whse. destroyed.
Milwaukee, Wis.—Blatz Brewing Co. whse. damaged.
Bonneyville, Alta.—Four bldgs. occupied by Russels Genl. Store, Joe Hamel Block, Dubuc Bldg., Ad Kopala bldg., destroyed.
Vancouver, B. C.—New automobiles in whse. of McLeod Rae Motors destroyed.
Lardenville, N. B.—Atlantic Fish Meal Co. plt. destroyed.
Liverpool, N. S.—Puerto Del Sol of Sun Harbor Shipping Co. of Cal., destroyed.
Brantford, Ont.—Mill Stock Co. destroyed. Fire originated in machine used to manufacture cloth material.
Hamilton, Ont.—Whse. of Zellers Construction Co. destroyed.
Peterborough, Ont.—Harry Zachs' bldg. containing offices and apts., completely destroyed. Stores include Tip Top Tailors, Pulver Ladies Wear, Ed Reilly's Men's Wear, Agnew Surpass Shoe Store, Dickson Dry Goods Store, Elliot's Drug Store, Deyells Stationery Store. Fire of incendiary origin.
Sarnia, Ont.—Plt. of Polymer Corp., Canadian Government owned, producer of synthetic rubber, damaged.
Temiskaning, Ont.—White Oaks Inn, apt. bldg. and two garages, destroyed.
Toronto, Ont.—Sorauren Avenue factory block occupied by O'Cedar of Canada, Ltd., mfrs. of waxes and adj. plt. of Robert Watson Co., confectionery mfrs., damaged.
Toronto, Ont.—Lakeshore Knitting Mills and Morrow Farm Implements Co., destroyed.
Montreal, Que.—Barn at Blue Bonnets Race Track, 15 valuable horses, destroyed.
St. Jerome, Que.—Ten commercial establishments and homes destroyed.

FIRE and POLICE UNIFORMS

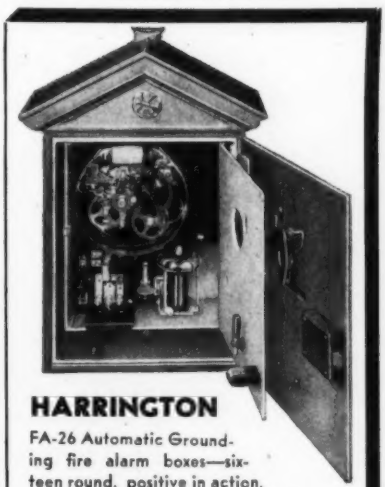
SHIRTS
BADGES
CAPS
INSIGNIA
ALL UNION MADE

Read what this pleased customer says!

"We have received all our uniforms and badges and believe me we are all pleased — fine fit and fine uniforms." (John A. Johnson, Treasurer, Golden Valley Fire Dept., Minneapolis, Minn.)

WRITE FOR
FIRE CATALOG G-62
or
POLICE CATALOG G-63

RUSSELL UNIFORM CO.
192 Lexington, New York 16, N. Y.
Corner 32nd Street • Phone MU 6-0828



HARRINGTON

FA-26 Automatic Grounding fire alarm boxes—sixteen round, positive in action, non-interfering, of the shunt and successive type, are equipped with quick acting doors the same as all other models. See our master boxes, pull station boxes, gongs, punch registers, take up reels, alarm panels, rectifiers, etc. Harrington equipment is giving excellent service in many municipalities and in industrial uses throughout the United States and Canada.

HARRINGTON SIGNAL COMPANY
MOLINE . . . ILLINOIS

EVERY Leece-Neville PRODUCT

A Gilt Edged Investment

For over 40 years Leece-Neville Generators, Cranking Motors, Regulators, Relays and Switches have set the standards on Buses, Trucks and Cars...wherever rugged construction and better than average performance is required.

NOW ANOTHER L-N BLUE CHIP INVESTMENT

A Leece-Neville Alternator continues to pay dividends long after the car or truck on which it was first installed has gone to the junk yard. The Leece-Neville AC-DC Alternator System delivers **25 to 35 amperes with engine idling** ... saves batteries, gas, oil, engine wear. There are L-N Alternators rated at 50 to 175 amps. Practically a lifetime unit, the L-N Alternator can be shifted to a new vehicle every time the old one is traded in. For all the facts, write The Leece-Neville Company, Cleveland 14, Ohio.

Leece-Neville

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JUNE, 1951

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Fabric Fire Hose Co.	401
Federal Enterprises, Inc., Signal Div.	399
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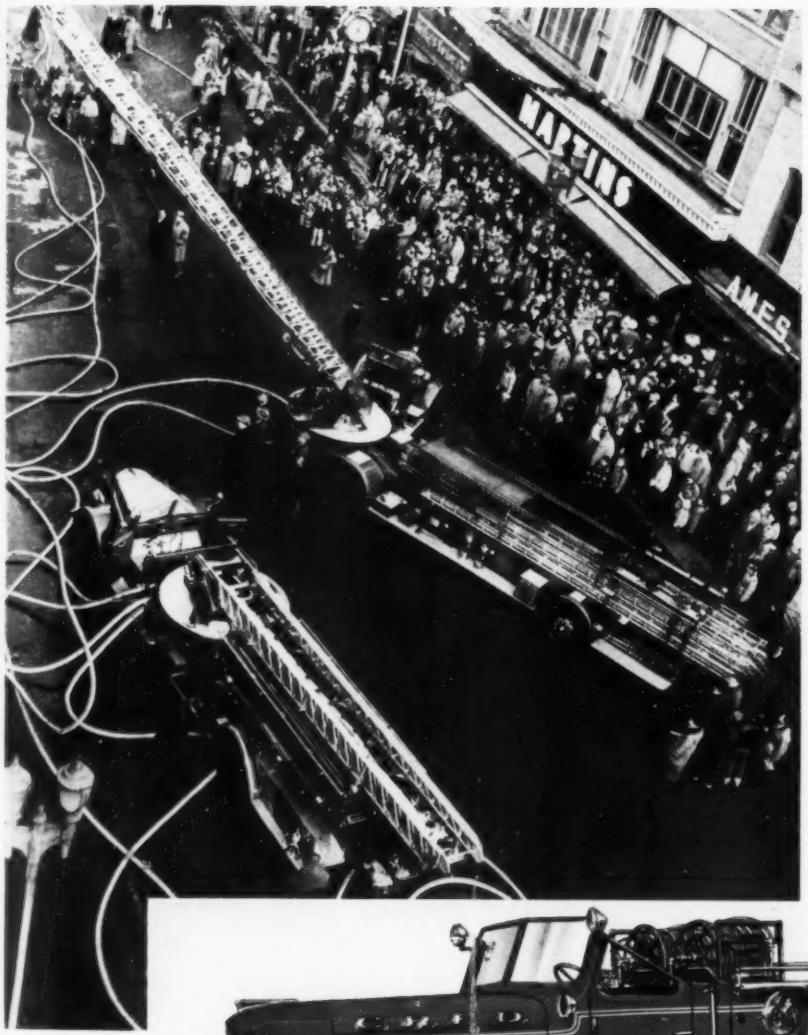

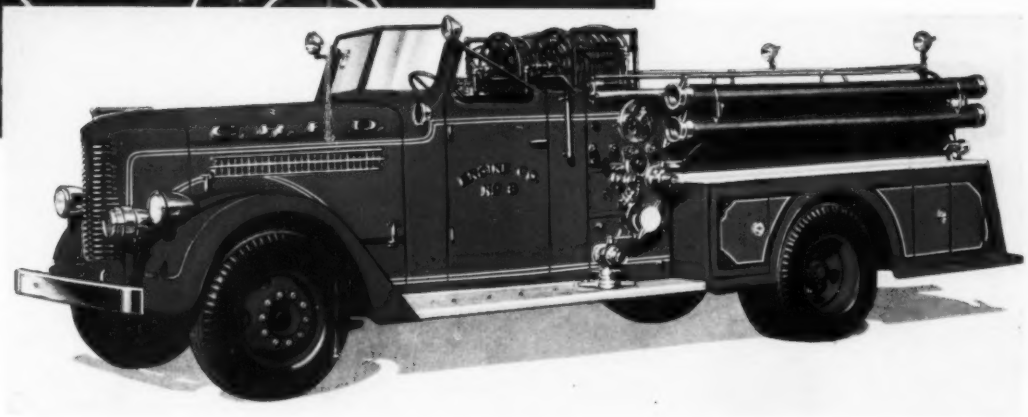

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